

# LBT-A190/D150/G1000

## SERVICE MANUAL

### REVISED

Discard LBT-A190/D150/G1000 Service Manual  
(No. 9-959-315-11) previously issued.  
This Service Manual contains it.

*US Model*

*LBT-D150/G1000*

*Canadian Model*

*AEP Model*

*UK Model*

*LBT-A190*

- LBT-A190/D150/G1000 are composed of following models.  
As for the service manual, it is issued for each component model,  
then, please refer to it.

### COMPONENT MODEL NAME FOR THESE SYSTEM

	LBT-A190			LBT-D150	LBT-G1000
	Canadian	AEP	UK	US	US
STEREO DECK RECEIVER	HCD-A190			HCD-D150	HCD-G1000
TURN TABLE	PS-LX56P				
SPEAKER SYSTEM	SS-D255				SS-G2000

### PARTS LIST

Part No.	Description	Part No.	Description
1-501-374-11	ANTENNA, LOOP	A-4674-087-A	TURN TABLE MAT ASSY(PS-LX56P )
1-501-536-11	ANTENNA( AEP )	1-467-430-11	COMMANDER , STANDARD ( RM-S221 )( HCD )
3-758-120-21	MANUAL, INSTRUCTION ( US ) ( ENGLISH )	2-181-754-21	COVER( MLY ), BATTERY(RM-S221 )
3-758-120-31	MANUAL, INSTRUCTION( Canadian ) ( FRENCH )	3-376-136-01	CUSHION( HALF )( HCD )
3-758-120-41	MANUAL, INSTRUCTION ( AEP ) ( ENGLISH )	* 4-947-532-01	SNOW BOX( L )( PS-LX56P )
3-758-120-51	MANUAL, INSTRUCTION ( UK ) ( ENGLISH , FRENCH , SPANISH , PORTUGUESE )	* 4-947-533-11	SNOW BOX( R )( PS-LX56P )
* 4-963-164-01	INDIVIDUAL CARTON( G1000 )	* 4-963-165-01	CUSHION( HCD )( AEP )
* 4-963-167-01	INDIVIDUAL CARTON( D150 )	* 4-964-535-01	CUSHION( SS-D255/G2000 )
* 4-963-168-01	INDIVIDUAL CARTON( CND )		
* 4-963-169-01	INDIVIDUAL CARTON( AEP )		
* 4-963-171-01	INDIVIDUAL CARTON( UK )		

#### NOTE :

- Items marked " \*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

## COMPACT Hi-Fi STEREO SYSTEM

# SONY®

Sony Corporation

Consumer A&V Products Company  
Home A&V Products Div.

9-959-315-12

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# HCD-A190/D150/G1000

## SERVICE MANUAL REVISED

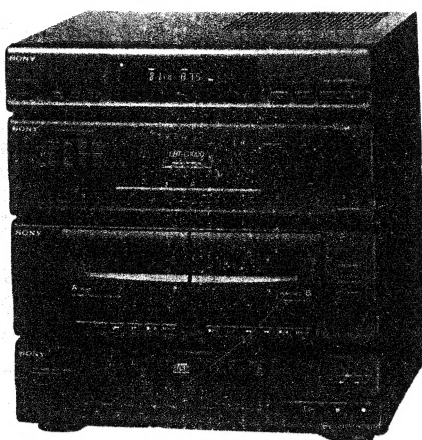


Photo: HCD-G1000

*US Model*

HCD-D150/G1000

*Canadian Model*

*AEP Model*

*UK Model*

HCD-A190

HCD-A190, HCD-D150 and HCD-G1000 are the tuner, deck, CD and amplifier section in LBT-A190, LBT-D150 and LBT-G1000 respectively.

### SPECIFICATIONS

#### AUDIO POWER SPECIFICATIONS (US model)

##### POWER OUTPUT AND TOTAL HARMONIC DISTORTION:

With 6-ohm loads, both channels driven, from 70—15,000Hz; rated 10 watts per channel minimum RMS power, with less than 10% total harmonic distortion from 250 milliwatts to rated output.

##### Amplifier

Continuous RMS power output

10W + 10W (6 ohms, at 1kHz,  
5% THD)

Input	Jack type	Sensitivity	Impedance
VIDEO (G1000)	Phono	300 mV	47 kilohms
PHONO (A190/D150)	Phono	3 mV	47 kilohms

Output	Jack type	Impedance
HEADPHONES	Stereophone	Accepts headphones of 8 ohms or more

Frequency response 15Hz to 50kHz  $\pm 3$  dB

CD Section	Model Name Using Similar Mechanism	CDP-411/511/D7
	CD Mechanism Name	CDM14-5BD10
	Base Unit Name	BU-5BD10
DECK Section	Model Name Using Similar Mechanism	HTC-D159
	Tape Transport Mechanism Type	TCM-180VW-H11

##### Tuner

System

FM stereo

FM/AM superheterodyne tuner

FM tuner section

Tuning range

87.5 to 108MHz

Antenna

300 ohms balanced

75 ohms unbalanced

Intermediate frequency 10.7MHz

AM tuner section

Tuning range

AM: 530 to 1,710kHz (US, Canadian)

MW: 531 to 1,602kHz (AEP, UK)

LW: 153 to 279kHz (AEP, UK)

Antenna

AM loop antenna

External antenna terminal

Intermediate frequency 450kHz

##### Cassette deck

Recording system

4-track 2-channel stereo

DOLBY NR OFF (A190)

Frequency response

With Type II cassette (Sony UX-S)

40Hz to 14kHz ( $\pm 3$ dB)

With Type I cassette (Sony HF-S)

40Hz to 13kHz ( $\pm 3$ dB)

Wow and flutter

W. PEAK  $\pm 0.2\%$  (DIN) (A190)

0.1% (WRMS) (D150/G1000)

—continued on next page—

COMPACT DISC DECK RECEIVER  
**SONY** (R)



### Compact disc player

Laser	Semiconductor laser
Wavelength	780 - 790nm
Frequency response	2Hz to 20kHz $\pm$ 1dB
Harmonic distortion	Less than 0.01% (1kHz)

### General

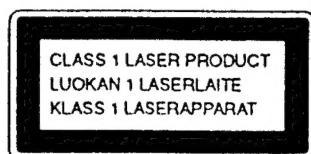
Power requirements	120V AC, 60Hz (US, Canadian) 220 - 230V AC, 50/60Hz (AEP) 240V AC, 50Hz (UK)
Power consumption	45W (US, Canadian) 50W (AEP, UK)
Mass	Approx. 7.5kg (16 lb 9 oz)
Dimensions	Approx. 355 $\times$ 380 $\times$ 325mm (14 $\times$ 15 $\times$ 12 $\frac{7}{8}$ inches) (w/h/d, including projections)

### Supplied accessories

Remote commander RM-S221	(1)
Batteries Sony SUM-3 (NS)	(2)
FM wire antenna	(1)
AM loop antenna	(1)
Turnpin adaptor	(1) (AEP1, UK : Supplied with the turntable)

Design and specifications are subject to change without notice.

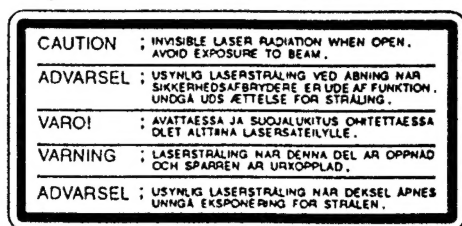
This appliance is classified as a CLASS 1 LASER product. The CLASS 1 LASER PRODUCT MARKING is located on the rear exterior.




### CAUTION



Use of controls or adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposure.

The following caution label is located inside the unit.



Dolby noise reduction manufactured under license from Dolby Laboratories Licensing Corporation. "DOLBY" and the double-D symbol  are trademarks of Dolby Laboratories Licensing Corporation.

### SAFETY-RELATED COMPONENT WARNING!!

COMPONENTS IDENTIFIED BY MARK  OR DOTTED LINE WITH MARK  ON THE SCHEMATIC DIAGRAMS AND IN THE PARTS LIST ARE CRITICAL TO SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY.

## SAFETY CHECK-OUT (US Model)

After correcting the original service problem, perform the following safety check before releasing the set to the customer:

Check the antenna terminals, metal trim, "metallized" knobs, screws, and all other exposed metal parts for AC leakage. Check leakage as described below.

### LEAKAGE TEST

The AC leakage from any exposed metal part to earth ground and from all exposed metal parts to any exposed metal part having a return to chassis, must not exceed 0.5 mA (500 microamperes). Leakage current can be measured by any one of three methods.

1. A commercial leakage tester, such as the Simpson 229 or RCA WT-540A. Follow the manufacturers' instructions to use these instruments.
2. A battery-operated AC milliammeter. The Data Precision 245 digital multimeter is suitable for this job.
3. Measuring the voltage drop across a resistor by means of a VOM or battery-operated AC voltmeter. The "limit" indication is 0.75 V, so analog meters must have an accurate low-voltage scale. The Simpson 250 and Sanwa SH-63Trd are examples of a passive VOM that is suitable. Nearly all battery operated digital multimeters that have a 2V AC range are suitable. (See Fig. A)

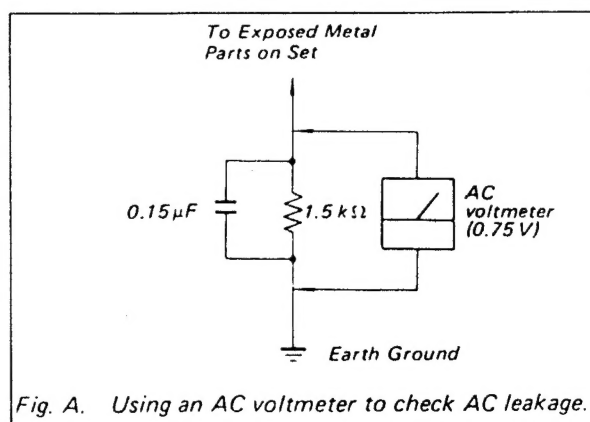



Fig. A. Using an AC voltmeter to check AC leakage.

### ATTENTION AU COMPOSANT AYANT RAPPORT À LA SÉCURITÉ!

LES COMPOSANTS IDENTIFIÉS PAR UNE MARQUE  SUR LES DIAGRAMMES SCHÉMATIQUES ET LA LISTE DES PIÈCES SONT CRITIQUES POUR LA SÉCURITÉ DE FONCTIONNEMENT. NE REMPLACER CES COMPOSANTS QUE PAR DES PIÈCES SONY DONT LES NUMÉROS SONT DONNÉS DANS CE MANUEL OU DANS LES SUPPLÉMENTS PUBLIÉS PAR SONY.

## NOTES ON HANDLING THE OPTICAL PICK-UP BLOCK OR BASE UNIT

The laser diode in the optical pick-up block may suffer electrostatic break-down because of the potential difference generated by the charged electrostatic load, etc. on clothing and the human body.

During repair, pay attention to electrostatic break-down and also use the procedure in the printed matter which is included in the repair parts.

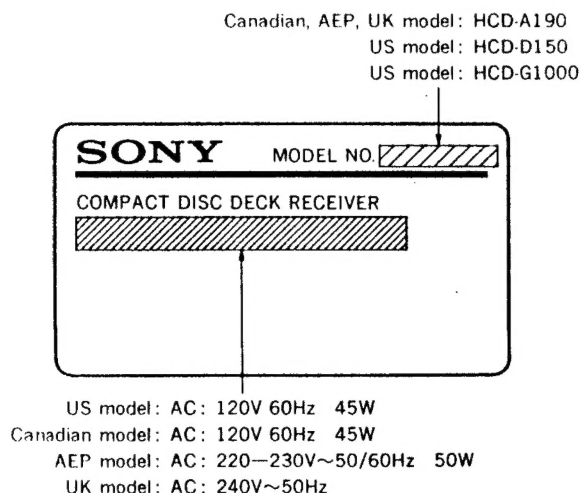
The flexible board is easily damaged and should be handled with care.

## NOTES ON LASER DIODE EMISSION CHECK

The laser beam on this model is concentrated so as to be focused on the disc reflective surface by the objective lens in the optical pick-up block. Therefore, when checking the laser diode emission, observe from more than 30 cm away from the objective lens.

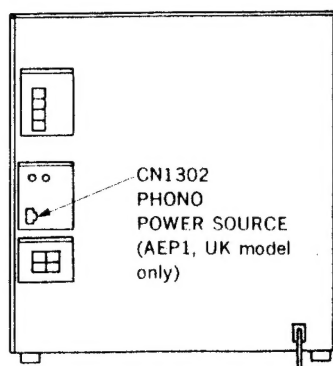
## MODEL IDENTIFICATION

—Label Model Number—



### • Abbreviation

AEP1: AEP unit with PHONO POWER SOURCE



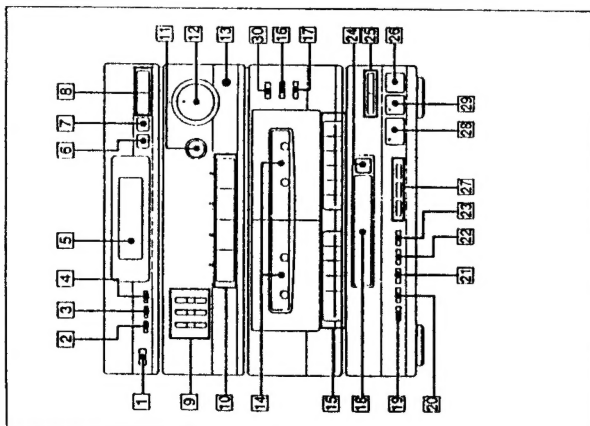
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## Location of Controls

Refer to the pages indicated in parentheses for details.



### Compact Disc Deck Receiver

#### Tuner section

- 1 POWER switch (page 6)
- 2 MEMORY button (page 9)
- 3 STEREO/MONO button (page 3)
- 4 TUNING/PRESET button (pages 8, 9)
- 5 Display window
- 6 BAND button (page 8)
- 7 SHIFT button (page 9)
- 8 DUAL MODE TUNING +/- buttons (pages 8, 9)

#### Amplifier section

- 9 3 BAND GRAPHIC EQUALIZER controls (LBT-A190/G1000)
- 10 TONE CONTROLS (LBT-D150) (page 7)
- 11 Function selectors and indicators
- 12 SURROUND control (page 7)
- 13 VOLUME control (page 7)
- 14 HEADPHONES jack (page 7)

#### Cassette deck section

- 15 Tape operating buttons
- 16 (play) button, (stop/eject) button, (rightward fast winding) button, (leftward fast winding) button
- 17 PAUSE button, (REC button only for Deck B)
- 18 TAPE SELECT (TYPE I/TYPE II) button (pages 10, 11, 12)
- 19 DUBBING SPEED (HIGH/NORMAL) button (LBT-G1000 only) (page 12)
- 20 DOLBY NR (noise reduction) (ON/OFF) switch (LBT-A190 only)

#### Compact disc player section

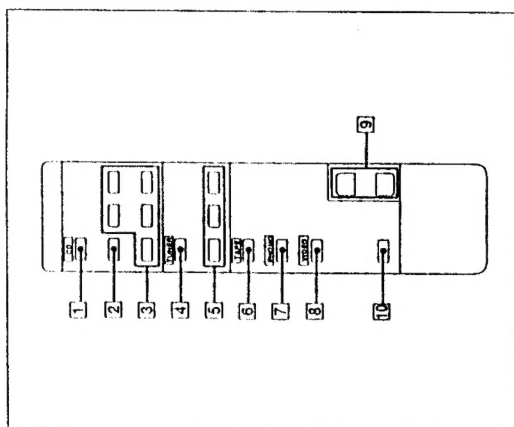
- 21 Disc tray
- 22 TIME button (page 13)
- 23 REPEAT button (page 14)
- 24 CHECK (program check) button (page 15)
- 25 CLEAR (program clear) button (page 16)
- 26 EDIT button (pages 16, 17)
- 27 OPEN/CLOSE button (page 12)
- 28 (stop) button (page 12)
- 29 PLAY MODE buttons
- 30 CONTINUE button (pages 14, 15, 17)
- 31 SHUFFLE button (page 14)
- 32 PROGRAM button (page 13)
- 33 (play) button and indicator (page 12)
- 34 (pause) button and indicator (page 12)

AMS is the abbreviation of Automatic Music Sensor.

### Remote commander RM-S221

- 1 CD function button
- 2 This button is inoperative with this unit.
- 3 CD operation buttons
- 4 (AMS\*) buttons, (play) button, (pause) button, (stop) button
- 5 TUNER function button
- 6 Tuner operation buttons
- 7 SHIFT button
- 8 PRESET +/- buttons
- 9 These buttons are used to select the preset station number.
- 10 TAPE function button
- 11 PHONO function button (operative with LBT-D150 only)
- 12 VIDEO function button (operative with LBT-G1000 only)
- 13 VOL (volume) +/- buttons
- 14 These buttons are inoperative with this unit.

AMS is the abbreviation of Automatic Music Sensor.



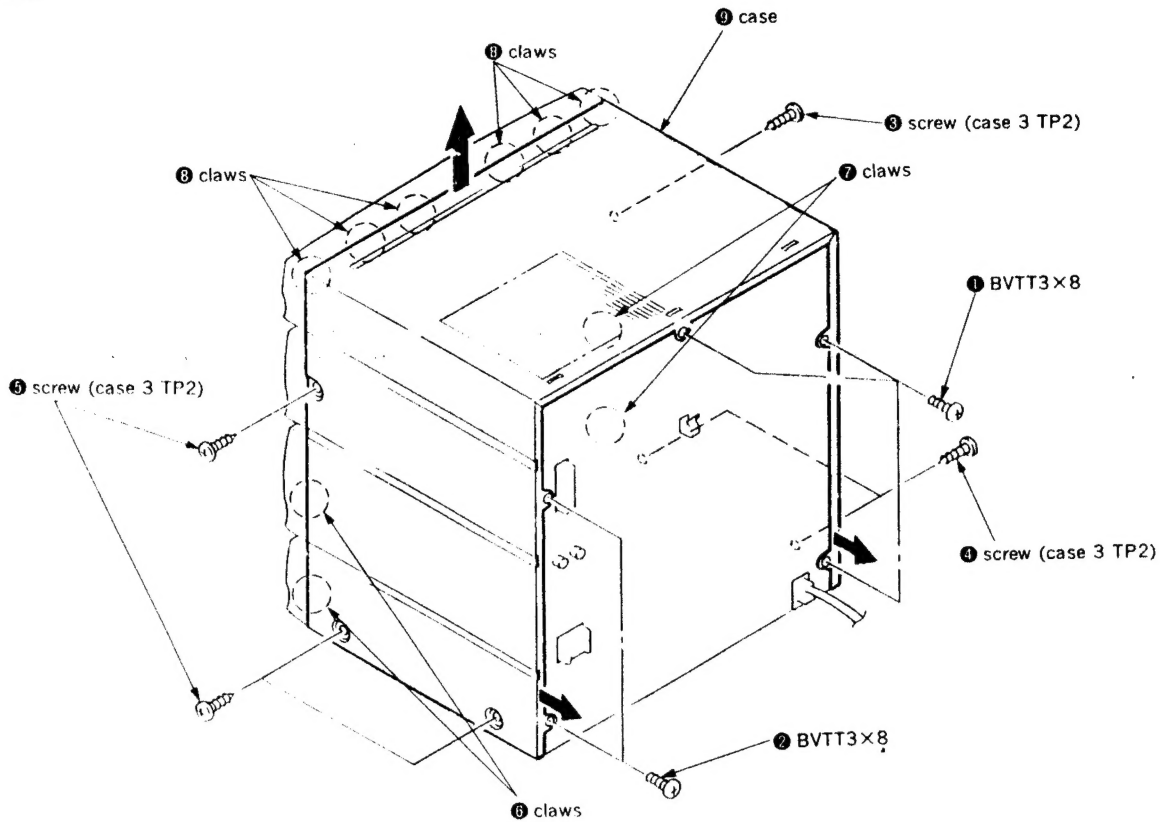
## SECTION 1 GENERAL

This section is extracted from instruction manual.

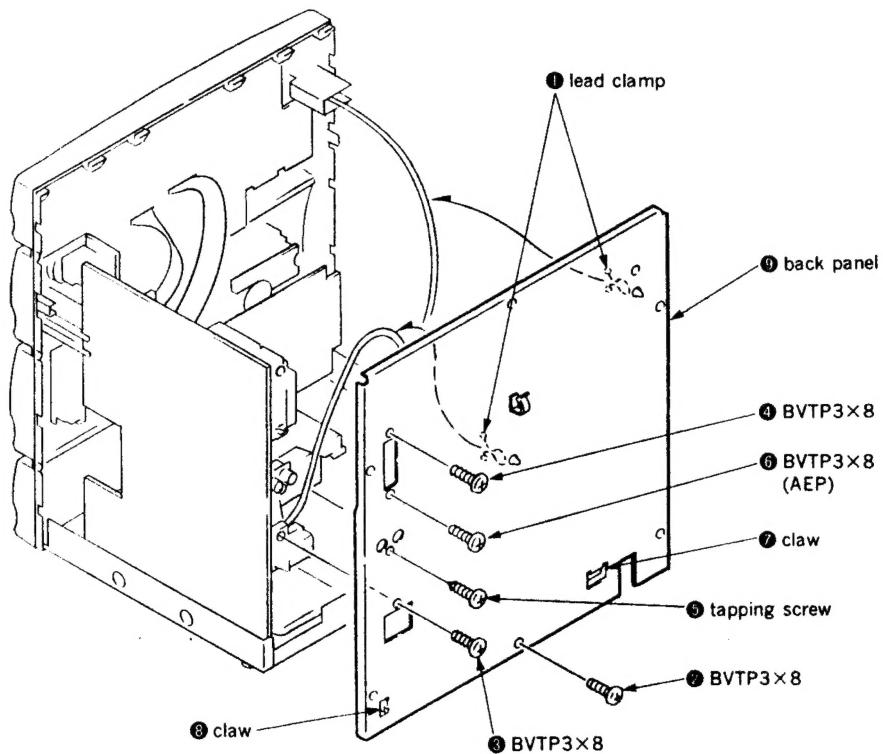
## SECTION 2 DISASSEMBLY

**Note :** Follow the disassembly procedure in the numerical order given.

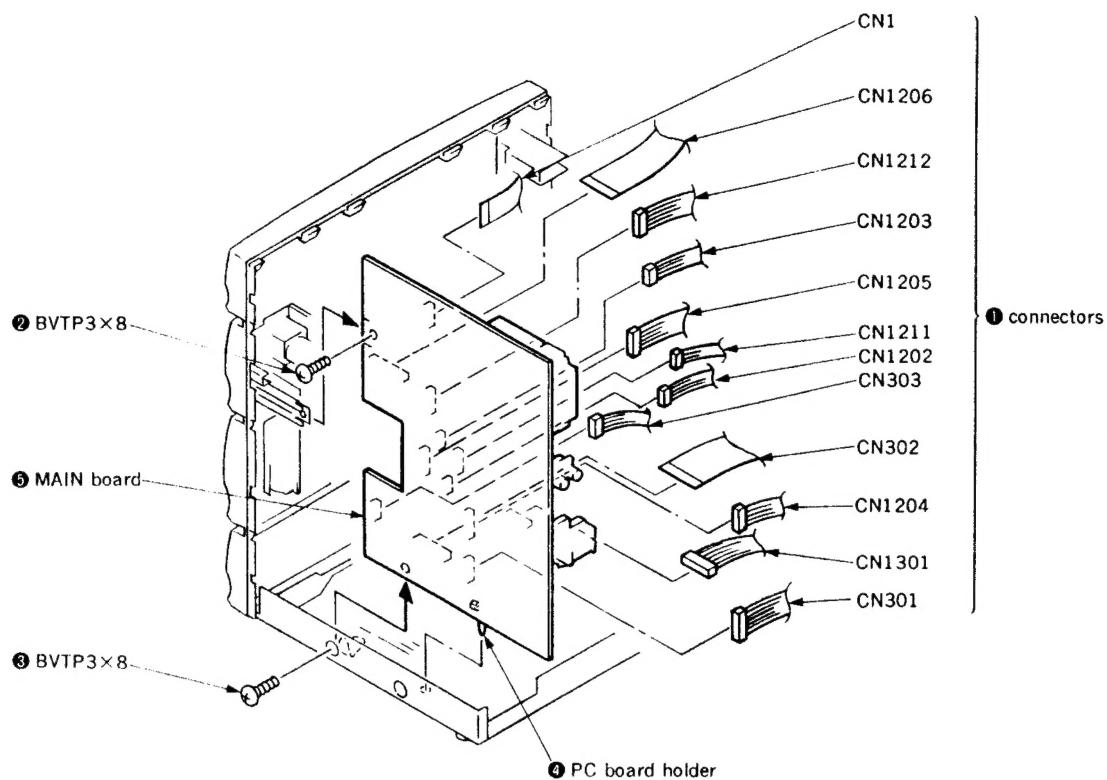
### 2-1. CASE



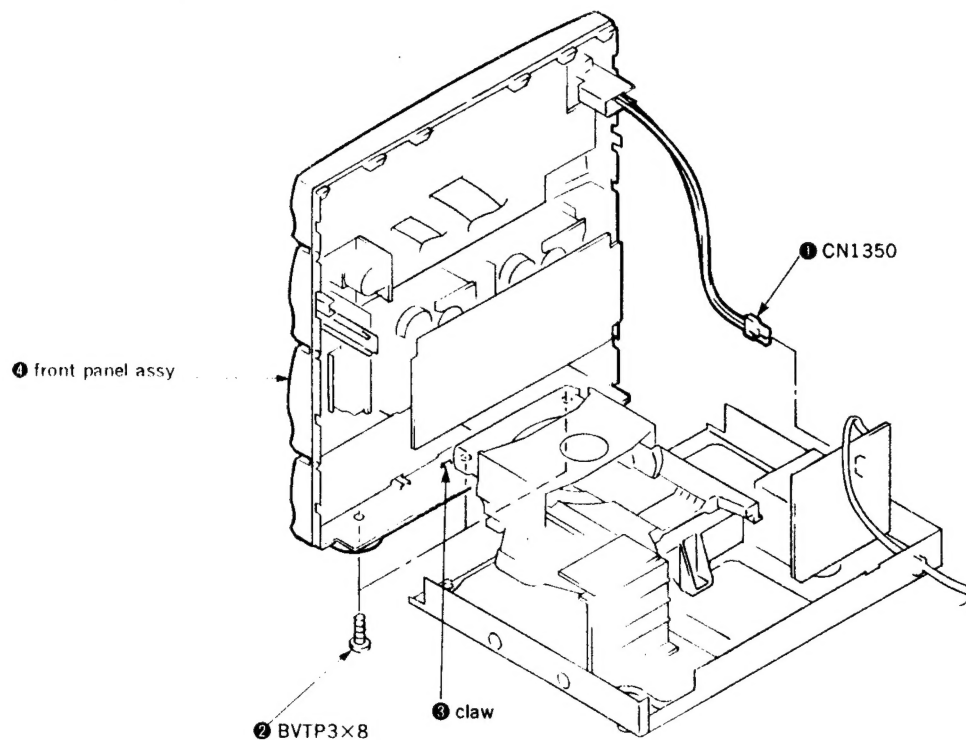
### 2-2. BACK PANEL



## 2-3. MAIN BOARD

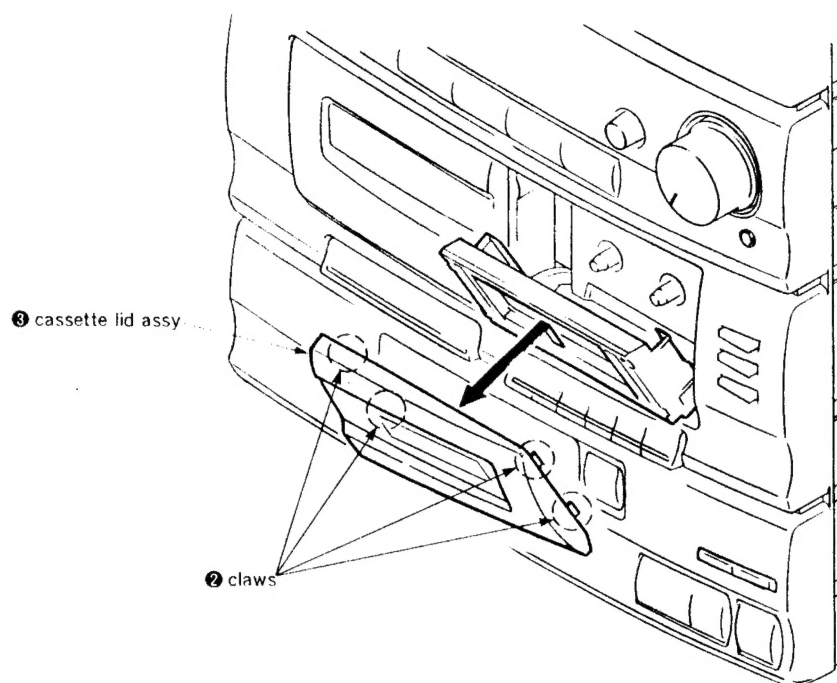


## 2-4. FRONT PANEL ASSY



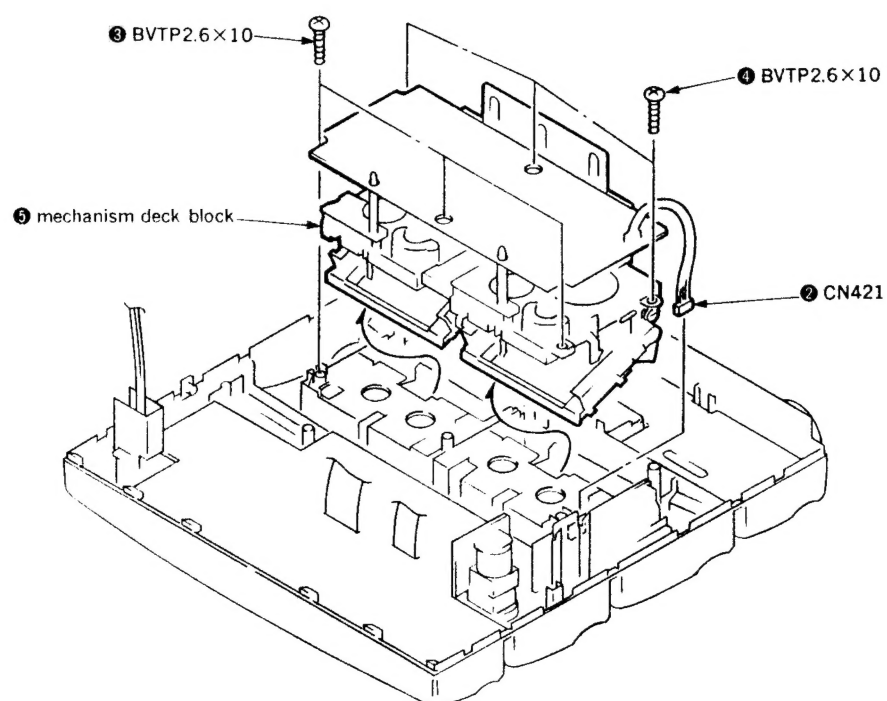
## 2-5. CASSETTE LID ASSY

- ① Push the EJECT button.

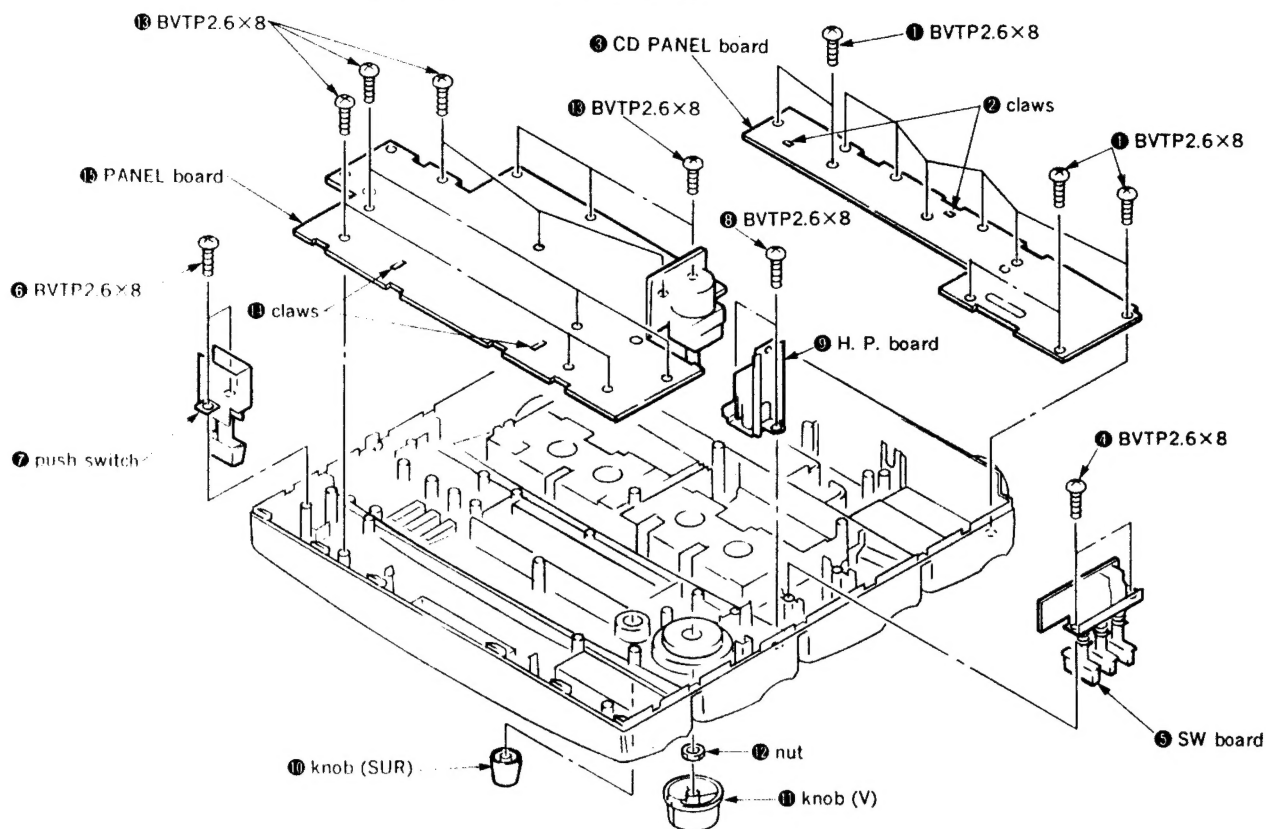


## 2-6. MECHANISM DECK BLOCK

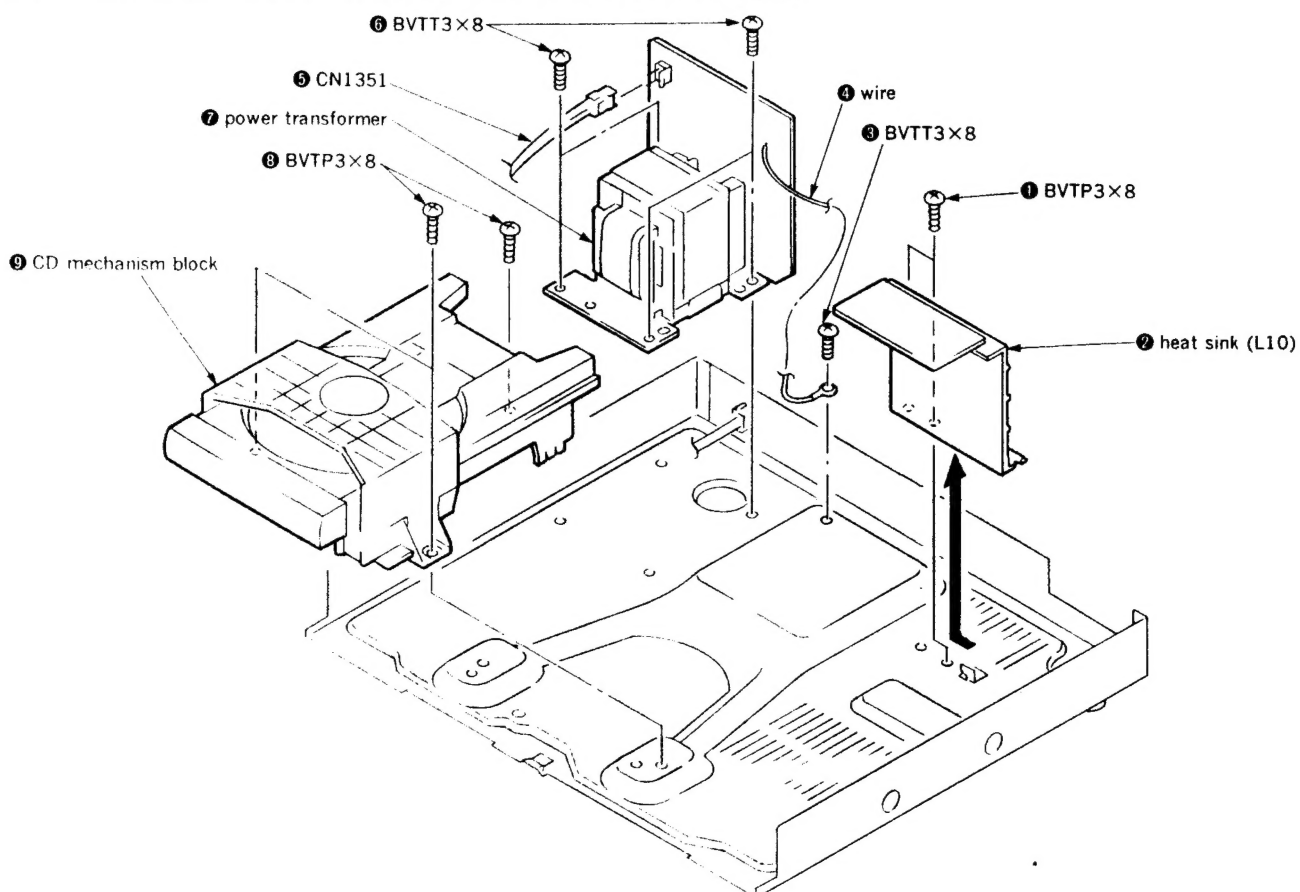
- ① Push the EJECT button.



## 2-7. CD PANEL/SW/H. P./PANEL BOARDS, PUSH SWITCH

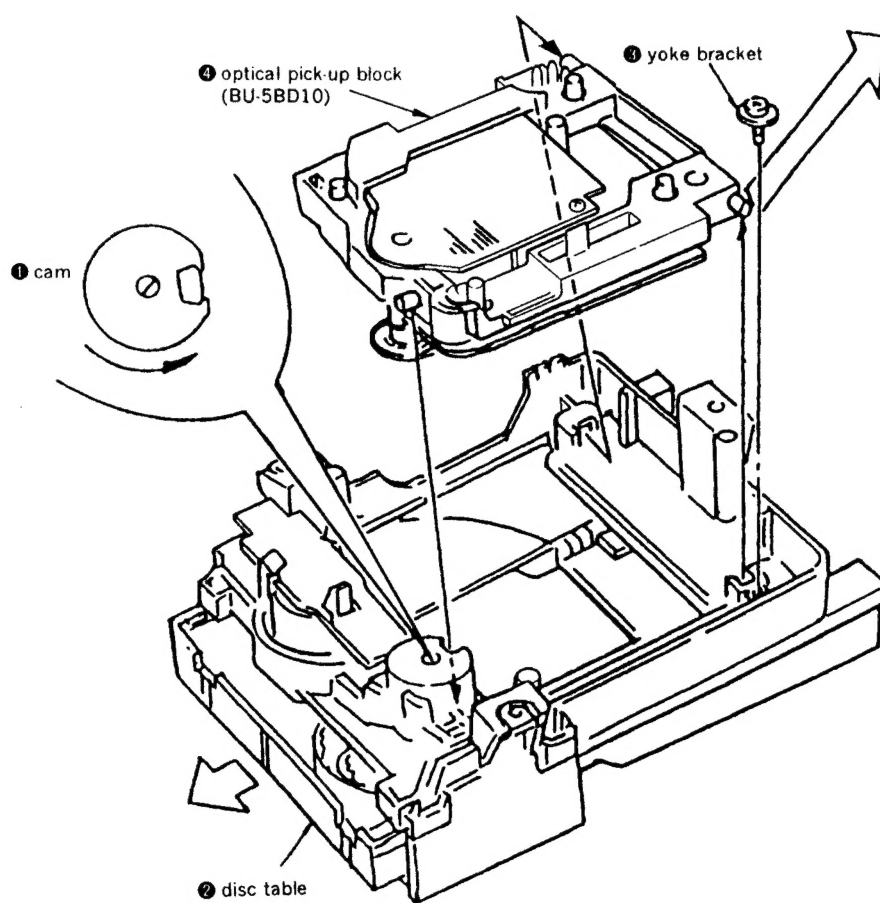


## 2-8. HEAT SINK, POWER TRANSFORMER, CD MECHANISM BLOCK



## 2-9. OPTICAL PICK-UP BLOCK

- ❶ Turn the cam to the direction of arrow (Counter clock wise) by minus screw driver.
- ❷ Take off the disc table.
- ❸ Remove the yoke bracket.
- ❹ Remove the optical pick up block (BU-5BD10) to the direction of arrow.





## SECTION 3 MECHANICAL ADJUSTMENTS

### PRECAUTION

1. Clean the following parts with a denatured alcohol-moistened swab :
 

record/playback heads	pinch rollers
erase head	rubber belts
capstan	idlers
2. Demagnetize the record/playback head with a head demagnetizer.
3. Do not use a magnetized screwdriver for the adjustments.
4. After the adjustments, apply suitable locking compound to the parts adjusted.
5. The adjustments should be performed with the rated power supply voltage unless otherwise noted.

### Torque Measurement

Torque	Torque meter	Meter reading
FWD	CQ-102C	30–70g•cm (0.42–0.97oz•inch)
FWD Back tension	CQ-102C	1.5–5.5g•cm (0.020–0.076oz•inch)
FF-REW	CQ-201B	63g•cm or more (0.87oz•inch or more)

## SECTION 4 ELECTRICAL ADJUSTMENTS

### DECK SECTION

0dB=0.775V

1. Demagnetize the record/playback head with a head demagnetizer. (Do not bring the head demagnetizer close to the erase head.)
2. Do not use a magnetized screwdriver for the adjustments.
3. After the adjustments, apply suitable locking compound to the parts adjusted.
4. The adjustments should be performed with the rated power supply voltage unless otherwise noted.
5. The adjustments should be performed in the order given in this service manual. (As a general rule, playback circuit adjustment should be completed before performing recording circuit adjustment.)
6. The adjustments should be performed for both L-CH and R-CH.

- Switches and controls should be set as follows unless otherwise specified.

TAPE SELECT switch : TYPE I

DOLBY NR switch (A190) : OFF

Type	Signal	Used for
P-4-A100	10kHz, -10dB	Azimuth Adjustment
WS-48B	3kHz, 0dB	Tape Speed Adjustment
P-4-L300	315Hz, 0dB	Level Adjustment

### Record/Playback Head Azimuth Adjustment

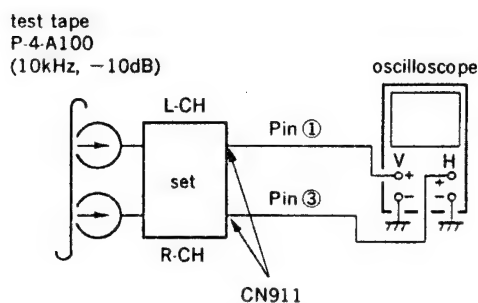
#### DECK A

#### DECK B

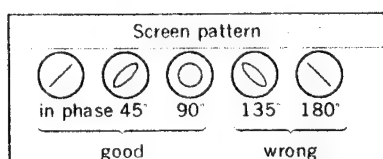
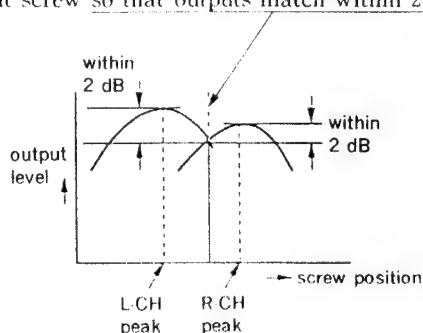
**Note:** Perform this adjustments for both decks.

#### Procedure :

1. Mode : Playback

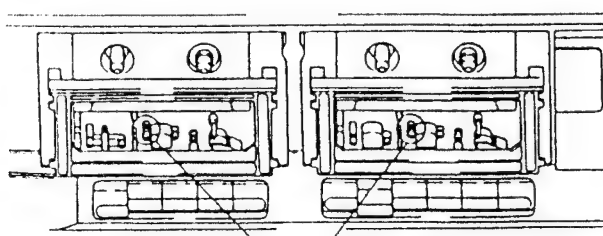


- Turn the adjustment screw and check output peaks. If the peaks do not match for L-CH and R-CH, turn the adjustment screw so that outputs match within 2 dB of peak.



- After the adjustments, apply suitable locking compound to the parts adjusted.

**Adjustment Location :**

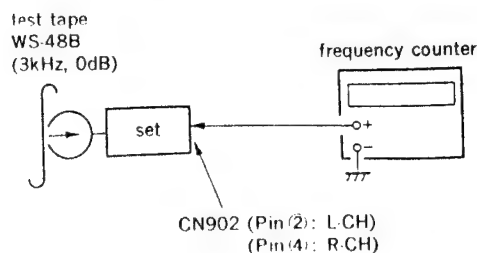


Adjustment screws  
REC/PB head (deck B)  
or PB head (deck A)

## Tape Speed Adjustment DECK A DECK B

**Procedure :**

Mode : Playback



High speed adjustment (HCD-A190/G1000 only) (Must be first Adjustment deck B)

- Short pin CN912 on set "DUBBING SPEED" switch to "HIGH". Then at HIGH speed mode.
- Adjust RV901 so that the frequency counter reads  $6,000 \pm 20$ Hz.

Normal speed adjustment

- Remove the short pin from CN912 on set "DUBBING SPEED" switch to "NORMAL". Then at NORMAL speed mode.
- Adjust RV902 so that the frequency counter reads  $3,000 \pm 10$ Hz.

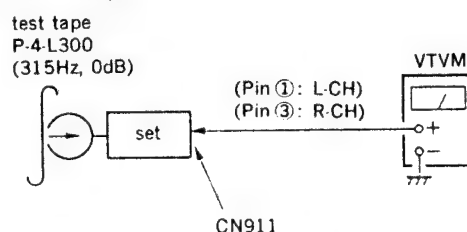
Frequency difference between deck A and deck B the beginning of the tape should be within  $\pm 1\%$ .

**Adjustment Location :** main TC board

## Playback Level Adjustment DECK A DECK B

**Procedure :**

Mode : Playback



Deck A side RV701 (L-CH), RV801 (R-CH)

Deck B side RV702 (L-CH), RV802 (R-CH)

so that the limits below are satisfied.

**Adjustable limits :**

CN911 PB level: 366.7 to 411.4mV ( $-6.5$  to  $-5.5$ dB)

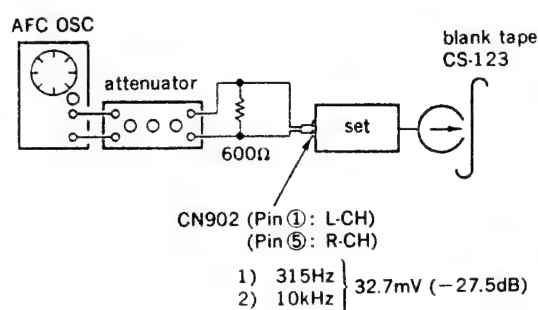
level difference between the channels: within  $\pm 1$ dB

**Adjustment Location :** main TC board

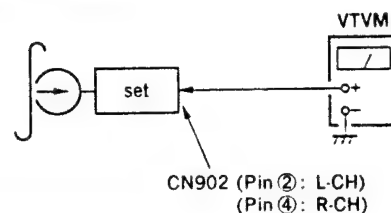
## Record Bias Current Adjustment DECK B

**Procedure :**

- Mode : record



- Mode : Playback



- (1) Supply a 32.7mV ( -27.5dB) signal (315Hz) from the CN902. Adjust the VOLUME control so that a 24.5mV ( -30dB) signal is output to the headphones terminal.
- (2) Insert alignment tape CS-123 into deck B and put the set into the REC mode.
- (3) Adjust the signal frequency to 10kHz.
- (4) Put the set into the PB mode and adjust RV704 (L-CH) and RV804 (R-CH) in the REC mode so that the level difference between 315Hz and 10kHz is within  $0 \pm 0.5\text{dB}$ .
- (5) Repeatedly put the set into the REC and PB modes two to four times and adjust the bias.

#### Adjustable limits :

The playback level of 10kHz signal relative to that of 315Hz:  $0\text{dB} \pm 0.5\text{dB}$

**Adjustment Location :** main TC board

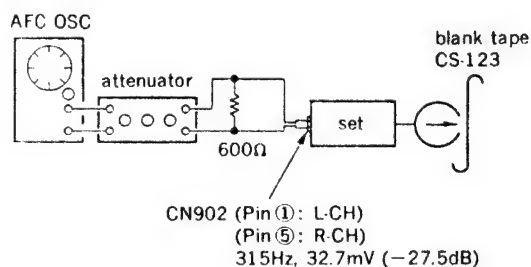
#### Record Level Adjustment **DECK B**

##### Setting :

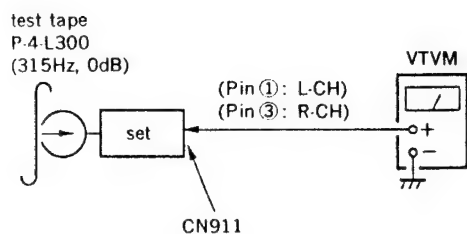
TAPE SELECT switch: TYPE I

##### Procedure :

1. Mode: record



2. Mode: playback



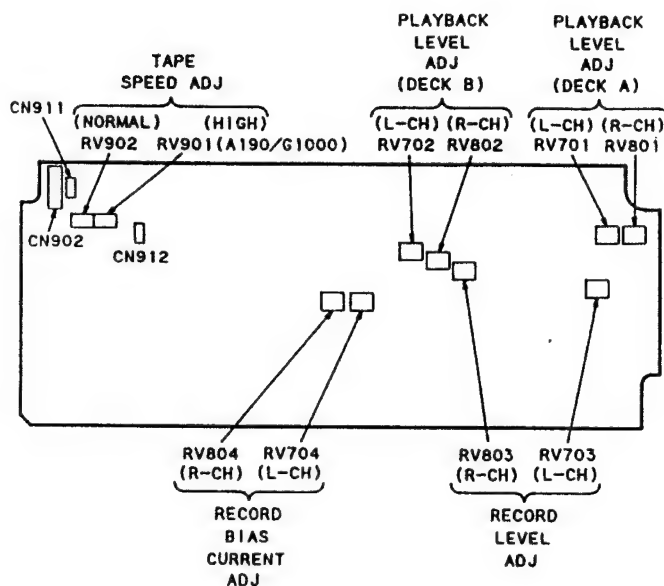
- (1) Supply a 32.7mV ( -27.5dB) signal (315Hz) from the CD terminal.
- (2) Insert alignment tape CS-123 into deck B and record the signal. Then playback the recorded portion of the tape and adjust RV703 (L-CH) and RV803 (R-CH) so that the 32.7mV ( -27.5dB) signal output is obtained at CN902 terminal.

#### Adjustable limits :

CN911 PB level: 30.9 to 34.6mV ( -28 to -27dB)

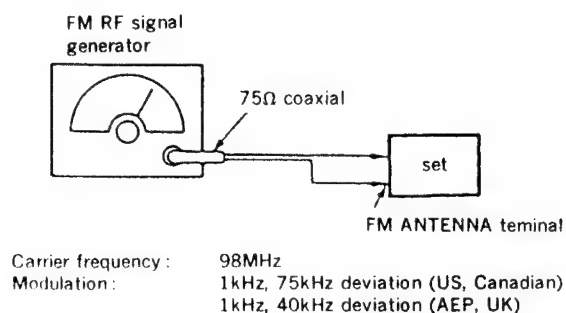
**Adjustment Location :** main TC board

**Adjustment Location :** main TC board (component side)



**TUNER SECTION**0dB = 1 $\mu$ V**• FM SECTION**

Setting :

**FM Tuned Level Adjustment**

Band : FM

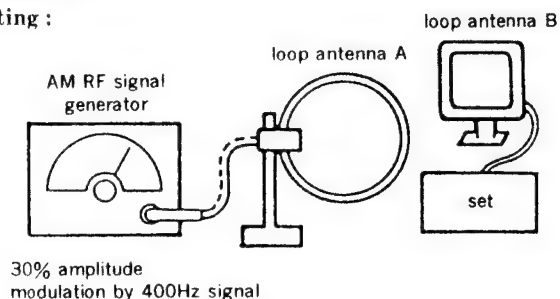
**Procedure :**

1. Supply a 17.8 $\mu$ V (25dB $\mu$ ) 98MHz signal from the ANTENNA terminal.
2. Tune the set to 98MHz.
3. Adjust RV2 so that the TUNED indicator goes on.

Adjustment Location : main board

**• AM SECTION**

Setting :

**AM (MW) Tuned Level Adjustment**

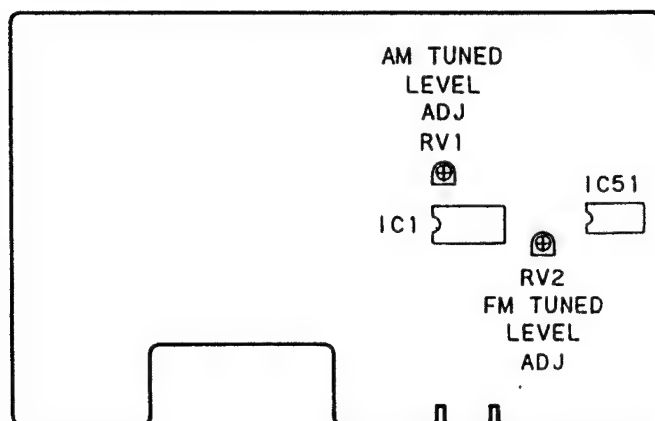
Band : AM or MW

**Procedure :**

1. Set loop antenna A so that the loop antenna B input level becomes 0.32mV (50dB $\mu$ ).
2. Tune the set to 1,050kHz (US, Canadian) or 999kHz (AEP, UK).
3. Adjust RV1 so that the TUNED indicator goes on.

Adjustment Location : main board (component side)

Adjustment Location : main board (component side)

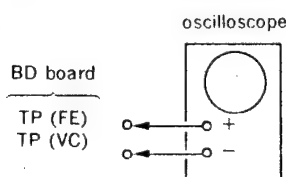


## CD SECTION

### Note :

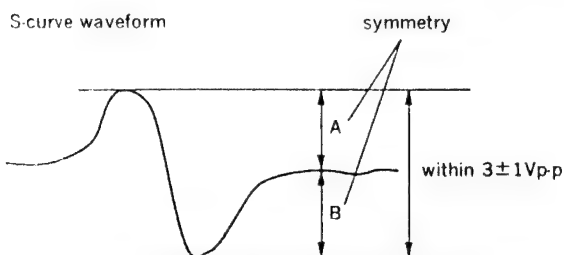
1. CD Block basically constructed to operate without adjustment. Therefore, check each item in order given.
2. Use YEDS-18 disc (3-702-101-01) unless otherwise indicated.
3. Use the oscilloscope with more than 10M $\Omega$  impedance.
4. Clean an objective lens by an applicator with neutral detergent when the signal level is low than specified value with the following checks.

### S-Curve Check



### Procedure :

1. Connect oscilloscope to test point TP (FE) on BD board.
2. Connect between test point TP (FEI) and TP (VC) by lead wire.
3. Turned Power switch on and actuate the focus search. (actuate the focus search when disc table is moving in and out.)
4. Check the oscilloscope waveform (S-curve) is symmetrical between A and B. And confirm peak to peak level within  $3 \pm 1V_{p-p}$ .

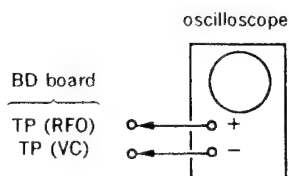


5. After check, remove the lead wire connected in step 2.

**Note :**

- Try to measure several times to make sure that the ratio of A : B or B : A is more than 10 : 7.
- Take sweep time as long as possible and light up the brightness to obtain best waveform.

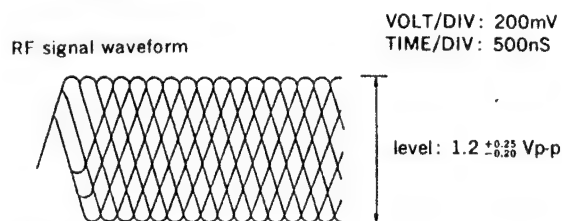
### RF Level Check



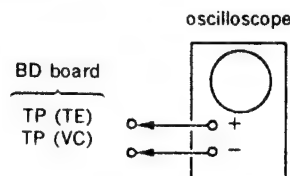
### Procedure :

1. Connect oscilloscope to test point TP (RFO) on BD board.
2. Turn Power switch on.
3. Put disc (YEDS-18) in and playback.
4. Confirm that oscilloscope waveform is clear and check RF signal level is correct or not.

**Note :** Clear RF signal waveform means that the shape "◇" can be clearly distinguished at the center of the waveform.

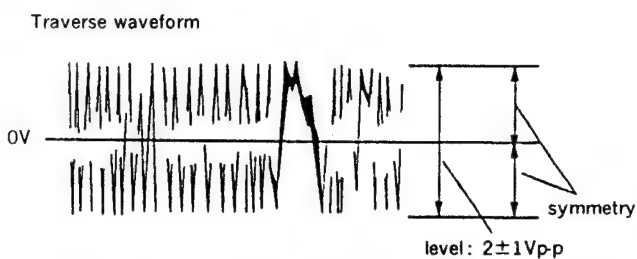


### E-F Balance Check



### Procedure :

1. Connect test point TP (ADJ) to ground and TP (TEI) to TP (VC) with lead wire.
2. Connect oscilloscope to test point TP (TE) on BD board.
3. Turn Power switch on.
4. Put disc (YEDS-18) is and playback.
5. Confirm that the oscilloscope waveform is symmetrical on the top and bottom in relation to 0V, and check this level.

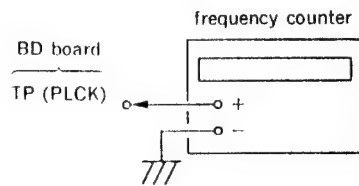


6. Remove the lead wire connected in step 1.

## RF PLL Free-run Frequency Check

### Procedure :

1. Connect frequency counter to test point (PLCK) with lead wire,

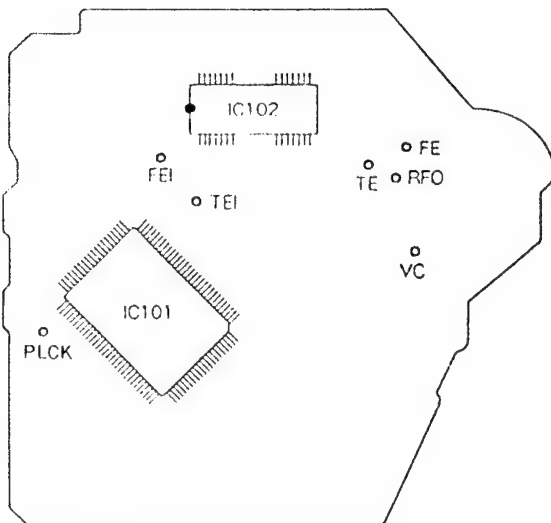


2. Turn Power switch on.
3. Confirm that reading on frequency counter is 13218MHz.

### Adjustment Location :

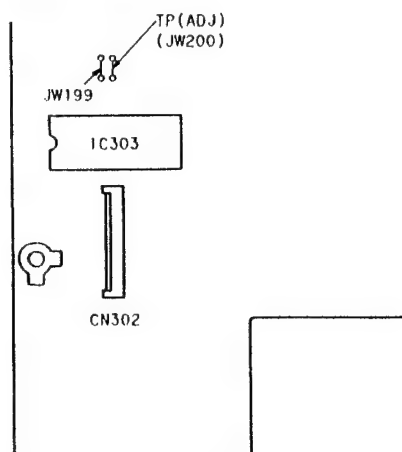
#### [BD BOARD]

—Conductor side—



#### [MAIN BOARD]

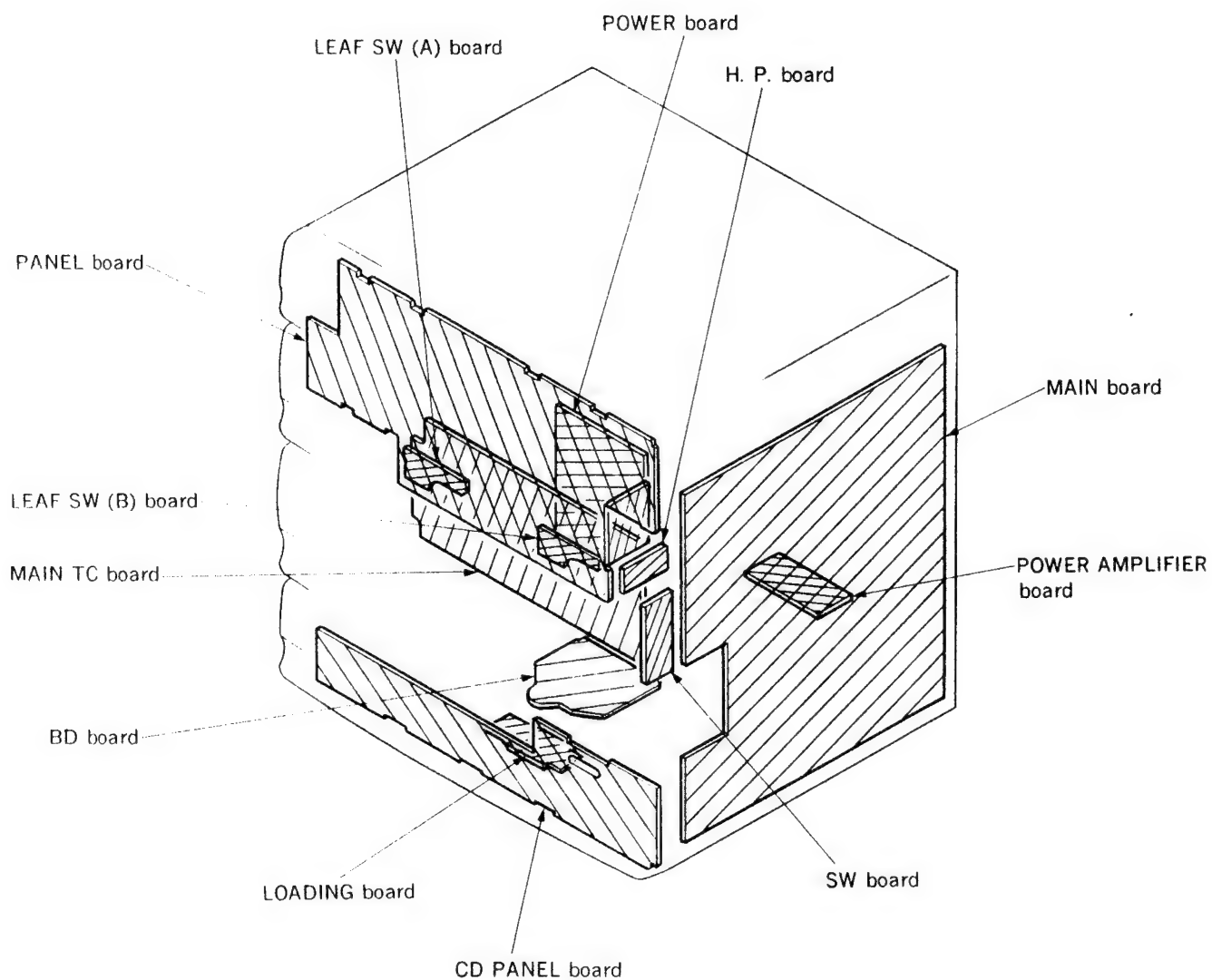
—Conductor side—





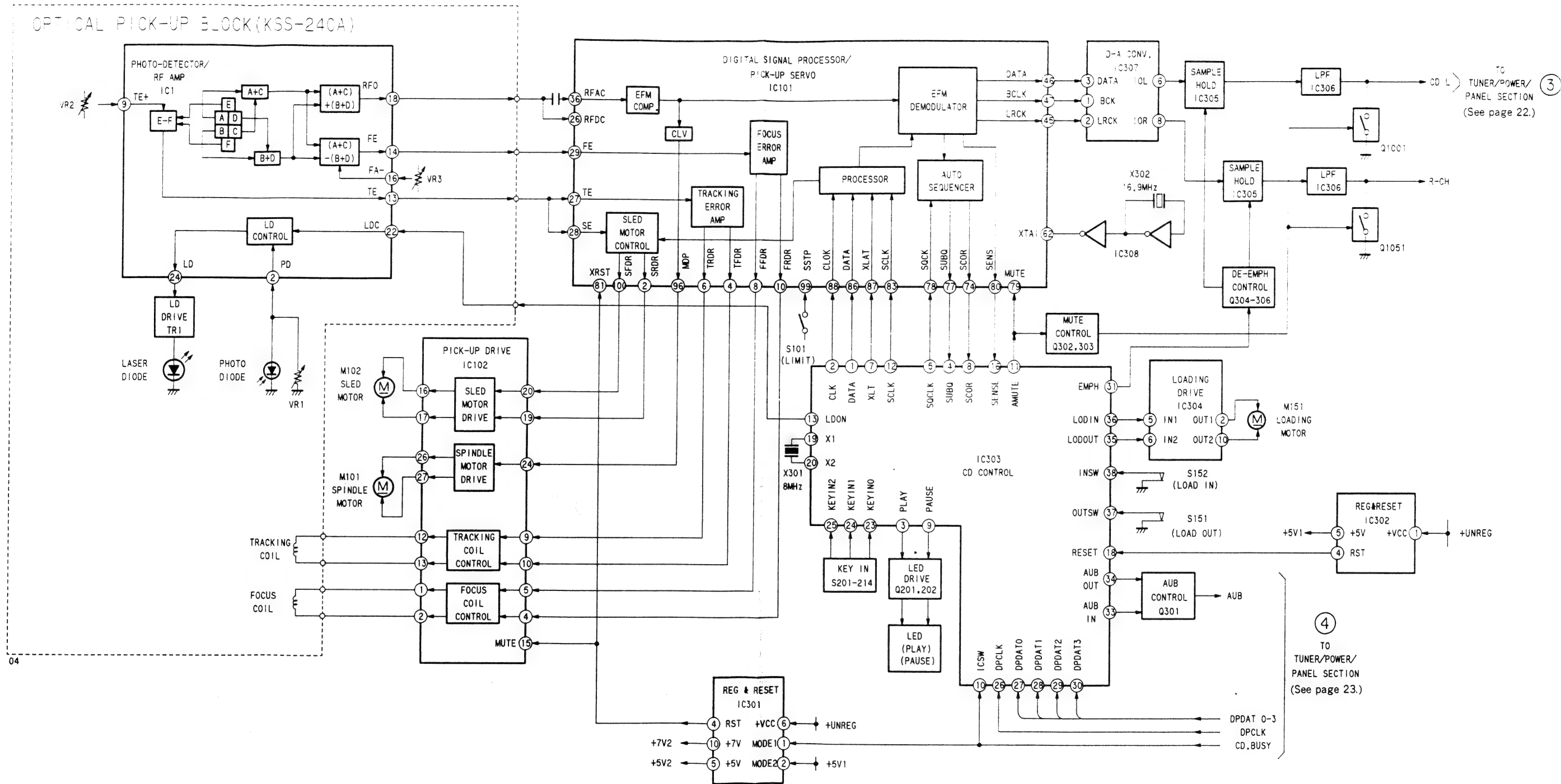
## SECTION 5 DIAGRAMS

### 5-1. CIRCUIT BOARDS LOCATION

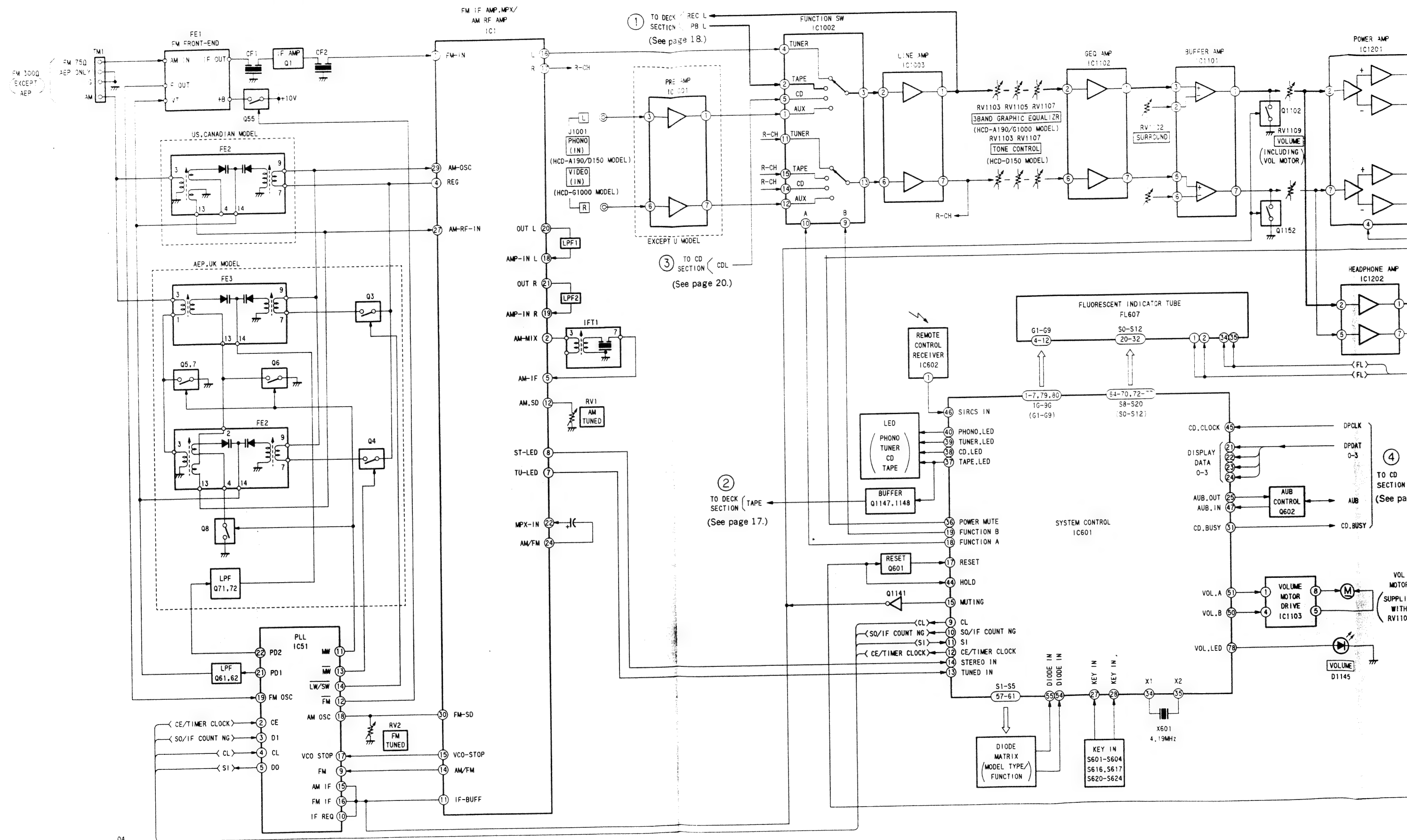


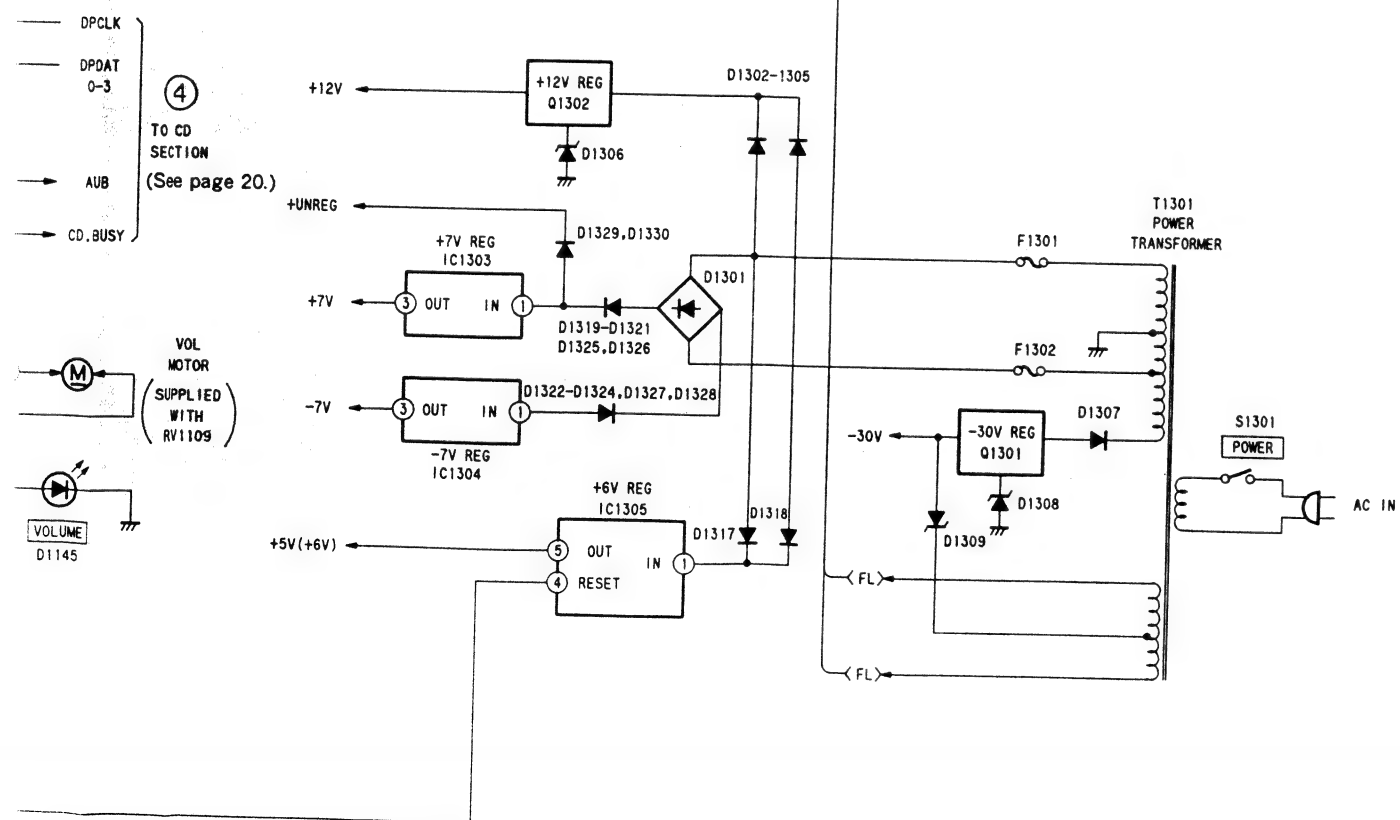
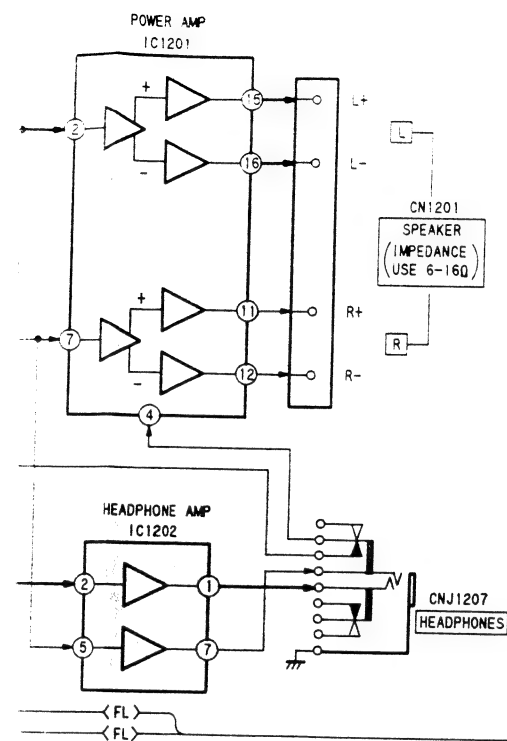


### 5-3. BLOCK DIAGRAM—CD SECTION—

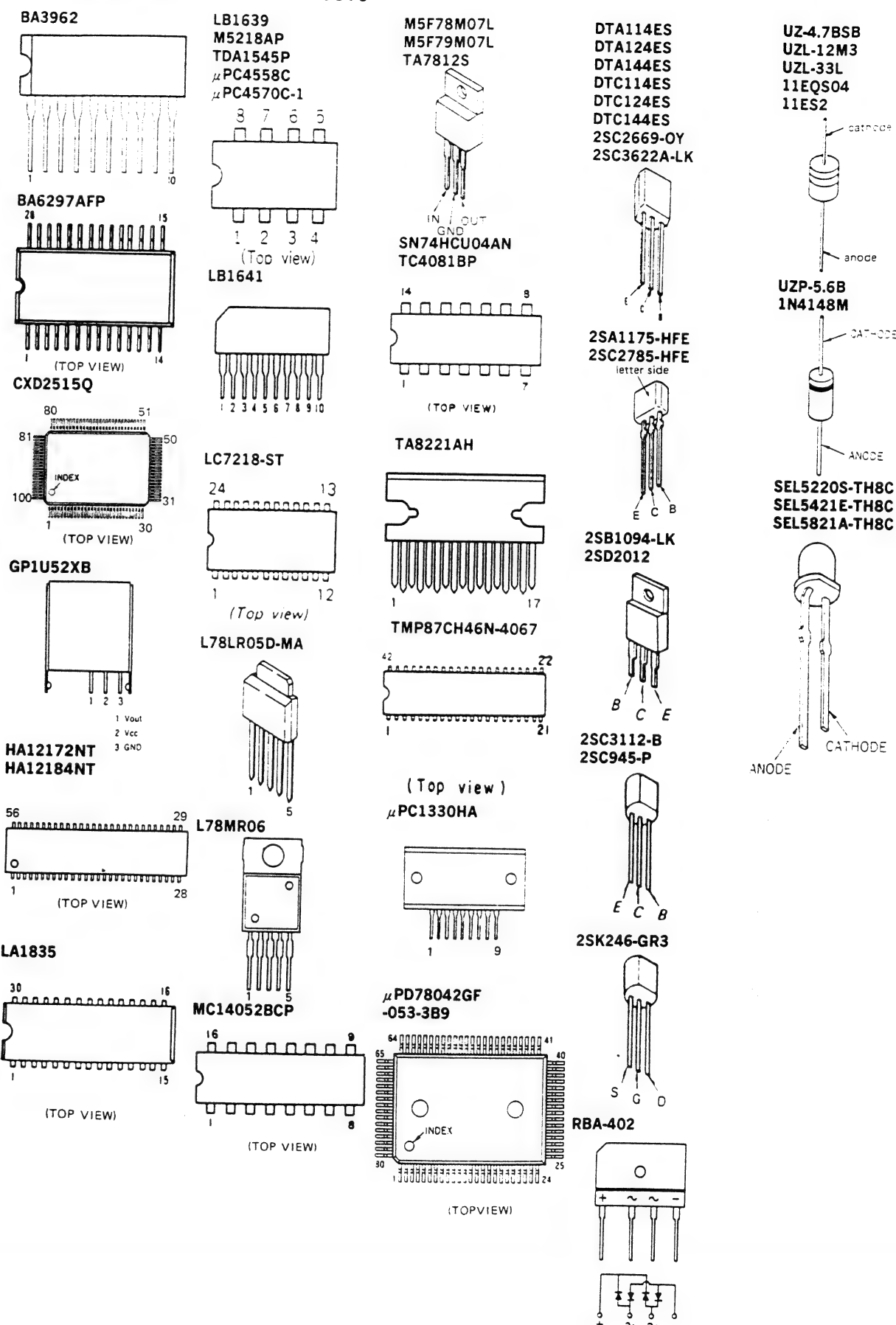


FM 3000  
(EXCEPT)  
AEP





## 5-5. SEMICONDUCTOR LEAD LAYOUTS



5-6. PRINTED WIRING BOARDS—CD/POWER/TUNER SECTION— • Refer to page 24 for Semiconductor Lead Layouts.

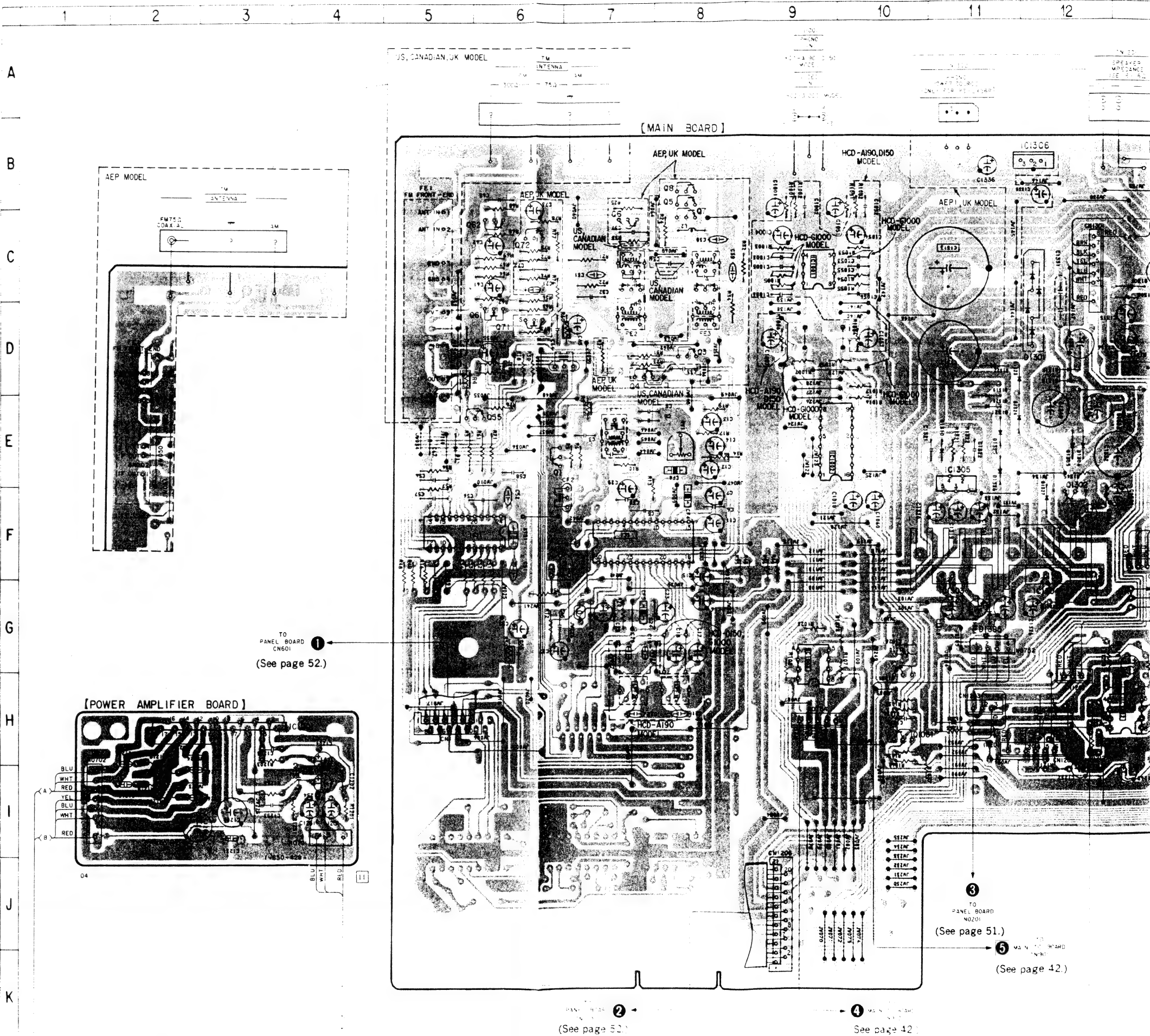
• Semiconductor Location

Ref. No.	Location	Ref. No.	Location
D1	E-5	IC304	K-16
D201	H-20	IC305	C-16
D202	I-21	IC306	C-15
D301	F-15	IC307	J-14
D302	J-16	IC308	J-15
D304	J-15	IC1001	C-9
D1201	H-11	IC1002	E-9
D1301	D-12	IC1003	G-9
D1302	E-13	IC1201	H-4
D1303	E-13	IC1202	H-13
D1304	E-12	IC1303	G-11
D1305	E-12	IC1304	G-12
D1306	F-12	IC1305	E-11
D1307	C-13	IC1306	B-12
D1308	C-13		
D1309	D-13	Q1	E-6
D1310	E-11	Q3	D-8
D1317	D-12	Q4	D-7
D1318	D-12	Q5	B-8
D1319	D-11	Q6	C-7
D1320	E-11	Q7	C-8
D1321	E-11	Q8	B-8
D1322	D-11	Q55	E-5
D1323	D-11	Q61	D-6
D1324	E-11	Q62	C-6
D1325	E-11	Q71	D-6
D1326	E-11	Q72	C-6
D1327	F-12	Q201	I-20
D1328	G-19	Q202	I-21
D1329	G-19	Q301	G-15
D1330	G-13	Q302	K-14
D1385	G-11	Q303	J-14
		Q304	B-16
IC1	F-7	Q305	C-16
IC51	F-5	Q306	C-16
IC101	E-25	Q1001	H-10
IC102	D-26	Q1051	H-10
IC301	D-16	Q1301	D-13
IC302	E-15	Q1302	F-12
IC303	G-15		

Note:

- — : parts extracted from the component side.
- : Through hole.
- — : indicates side identified with part number.
- ▨ : Pattern on the side which is seen.
- ▩ : Pattern on the rear side.

• Abbreviation  
AEP1: AEP unit with PHONO POWER SOURCE





5-6. PRINTED WIRING BOARDS—CD/POWER/TUNER SECTION— • Refer to page 24 for Semiconductor Lead Layouts.

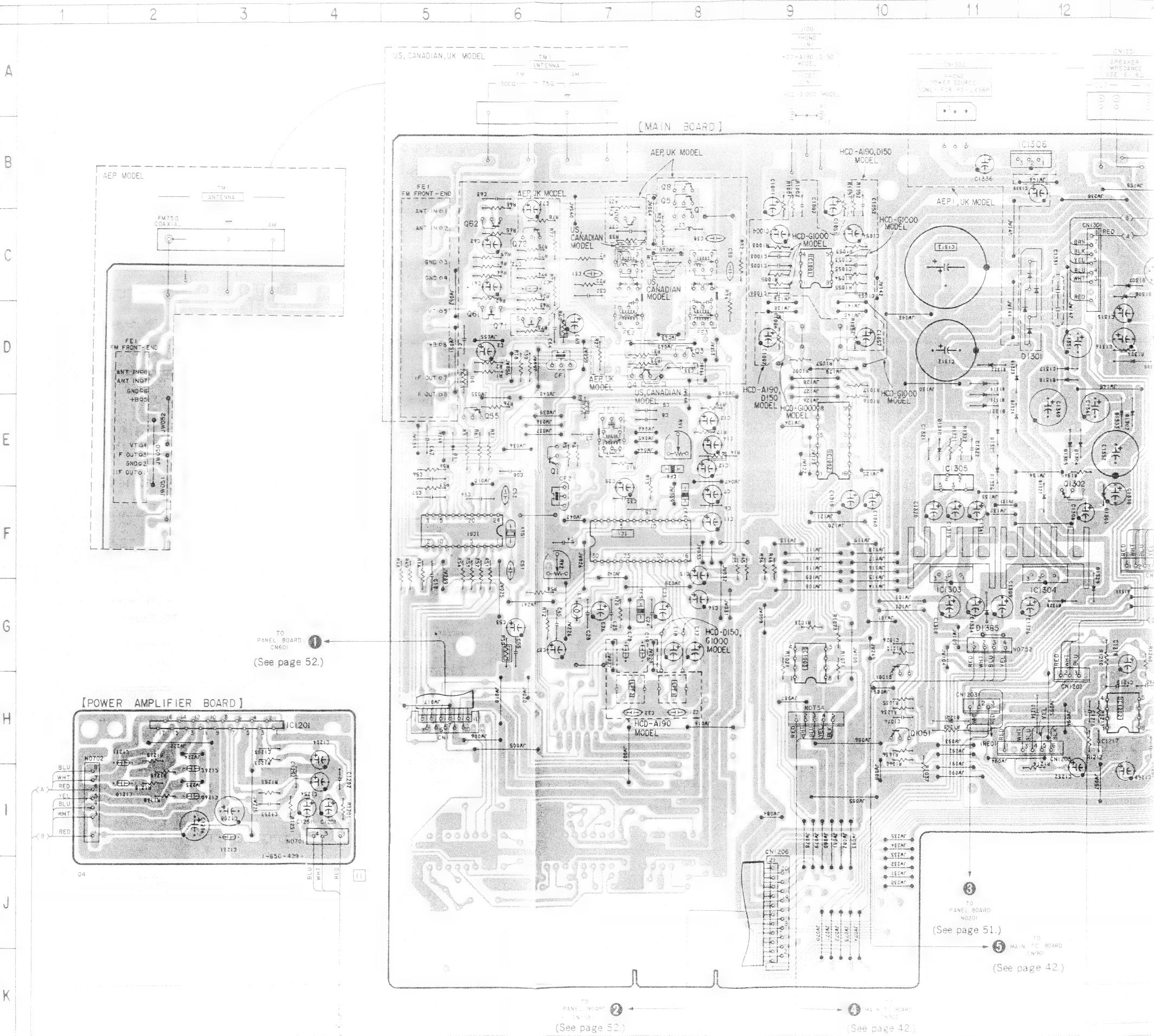
• Semiconductor Location

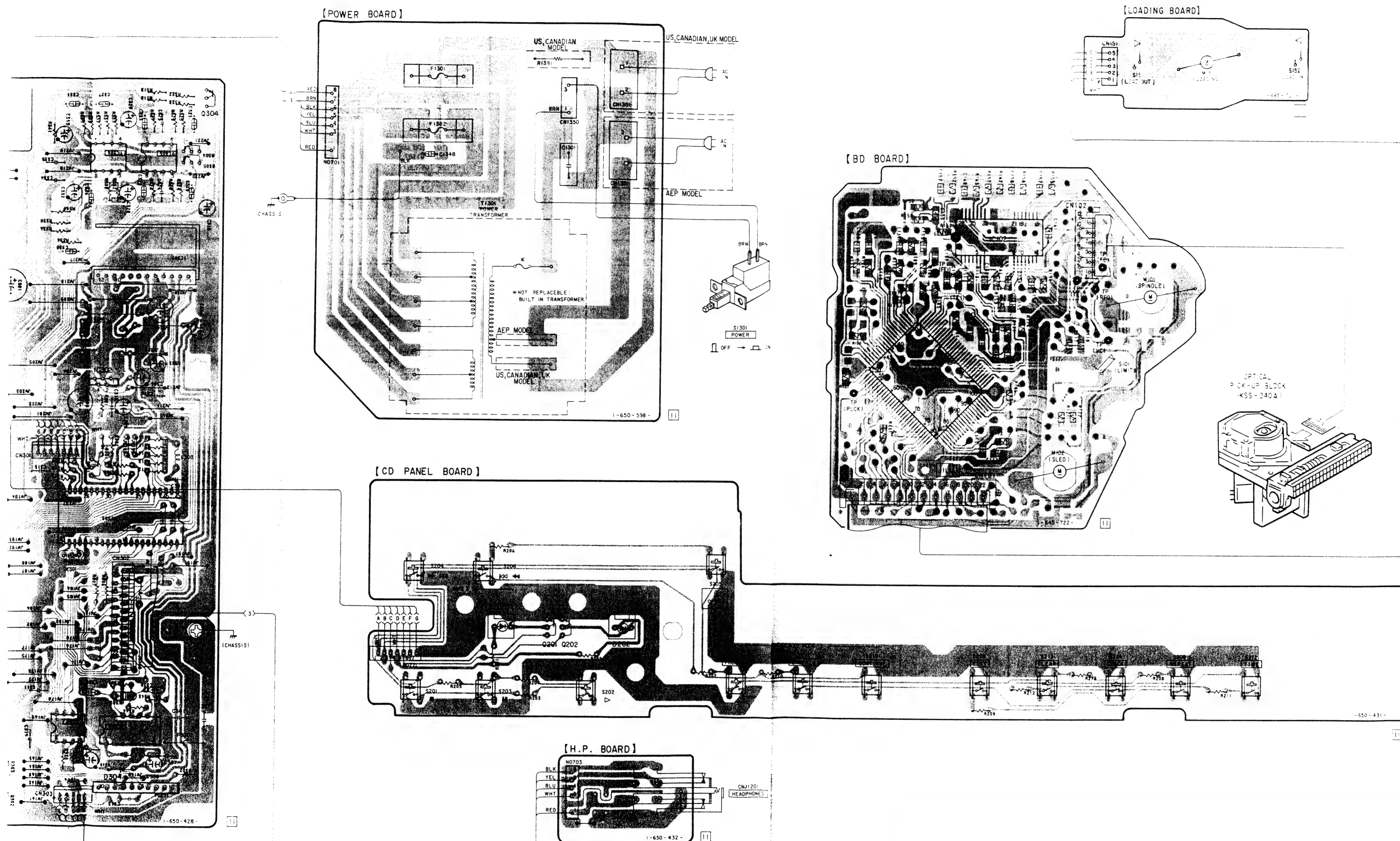
Ref. No.	Location	Ref. No.	Location
D1	E-5	IC304	K-16
D201	H-20	IC305	C-16
D202	I-21	IC306	C-15
D301	F-15	IC307	J-14
D302	J-16	IC308	J-15
D304	J-15	IC1001	C-9
D1201	H-11	IC1002	E-9
D1301	D-12	IC1003	G-9
D1302	E-13	IC1201	H-4
D1303	E-13	IC1202	H-13
D1304	E-12	IC1303	G-11
D1305	E-12	IC1304	G-12
D1306	F-12	IC1305	E-11
D1307	C-13	IC1306	B-12
D1308	C-13		
D1309	D-13	Q1	E-6
D1310	E-11	Q3	D-8
D1317	D-12	Q4	D-7
D1318	D-12	Q5	B-8
D1319	D-11	Q6	C-7
D1320	E-11	Q7	C-8
D1321	E-11	Q8	B-8
D1322	D-11	Q55	E-5
D1323	D-11	Q61	D-6
D1324	E-11	Q62	C-6
D1325	E-11	Q71	D-6
D1326	E-11	Q72	C-6
D1327	F-12	Q201	I-20
D1328	G-19	Q202	I-21
D1329	G-19	Q301	G-15
D1330	G-13	Q302	K-14
D1385	G-11	Q303	J-14
		Q304	B-16
IC1	F-7	Q305	C-16
IC51	F-5	Q306	C-16
IC101	E-25	Q1001	H-10
IC102	D-26	Q1051	H-10
IC301	D-16	Q1301	D-13
IC302	E-15	Q1302	F-12
IC303	G-15		

Note:

- — : parts extracted from the component side.
- : Through hole.
- — indicates side identified with part number.
- ▨ : Pattern on the side which is seen.
- ▩ : Pattern on the rear side.

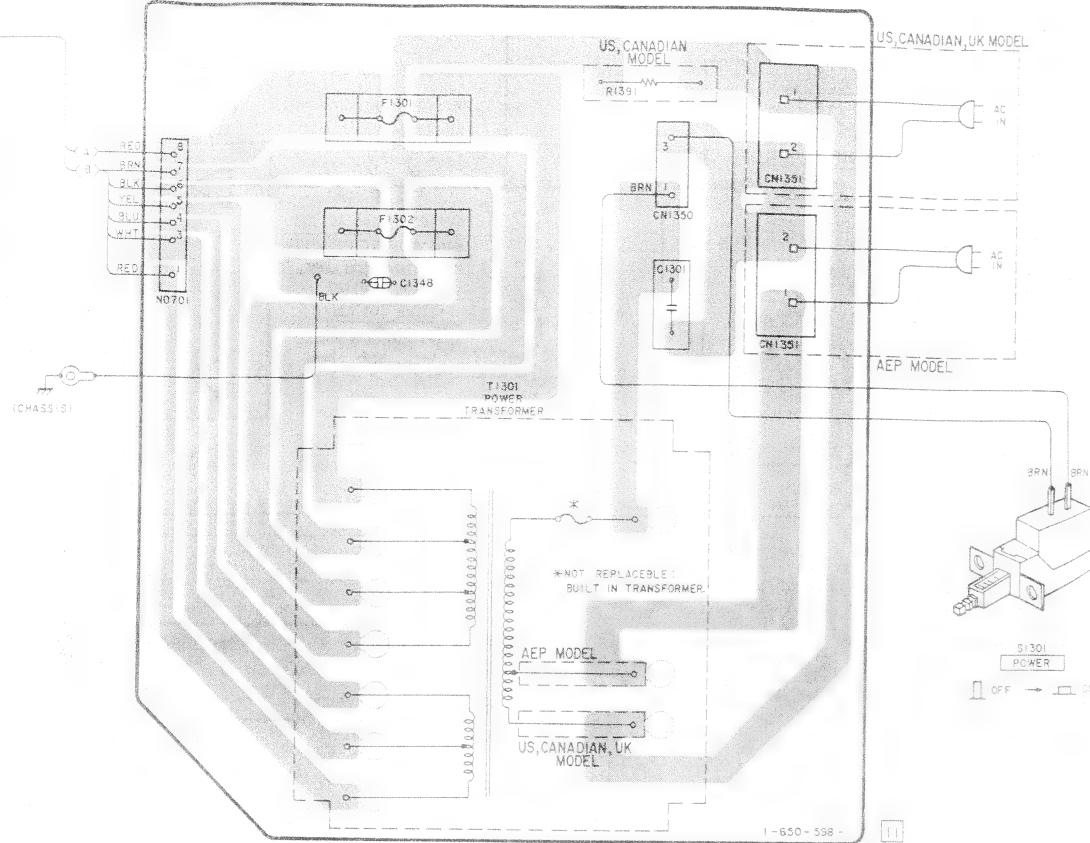
• Abbreviation  
AEP1: AEP unit with PHONO POWER SOURCE



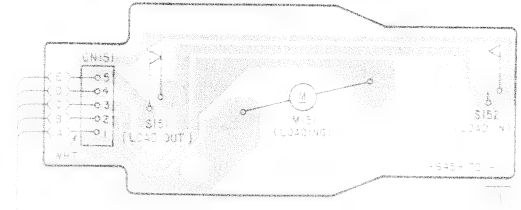




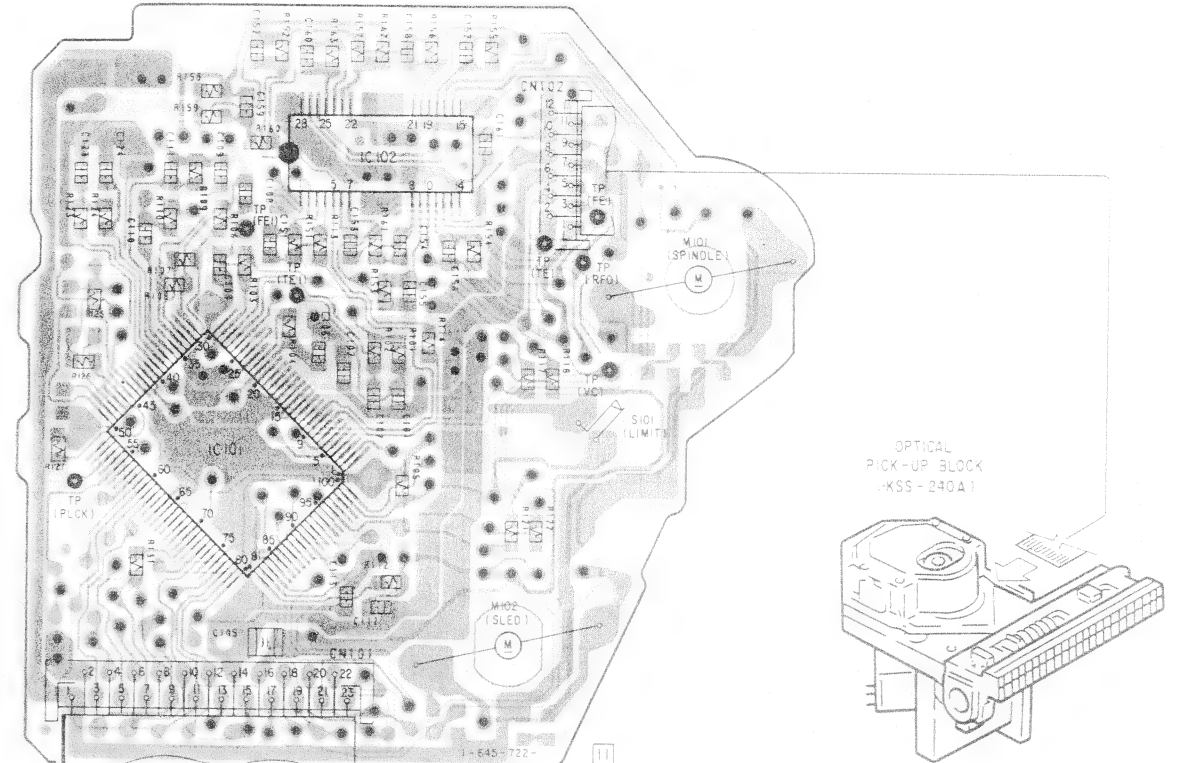
[POWER BOARD]



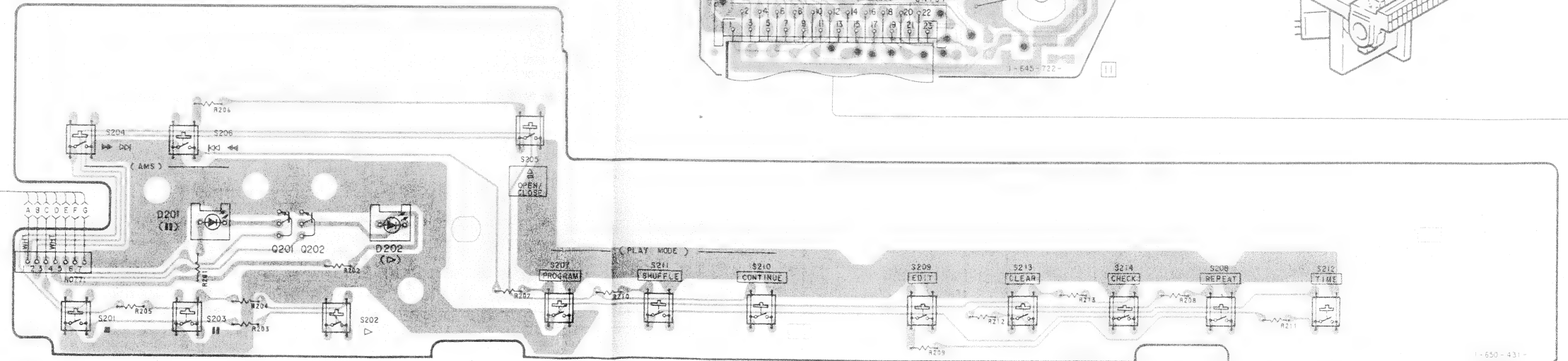
[LOADING BOARD]



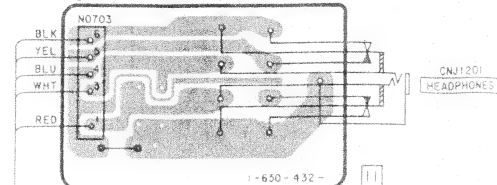
【BD BOARD】



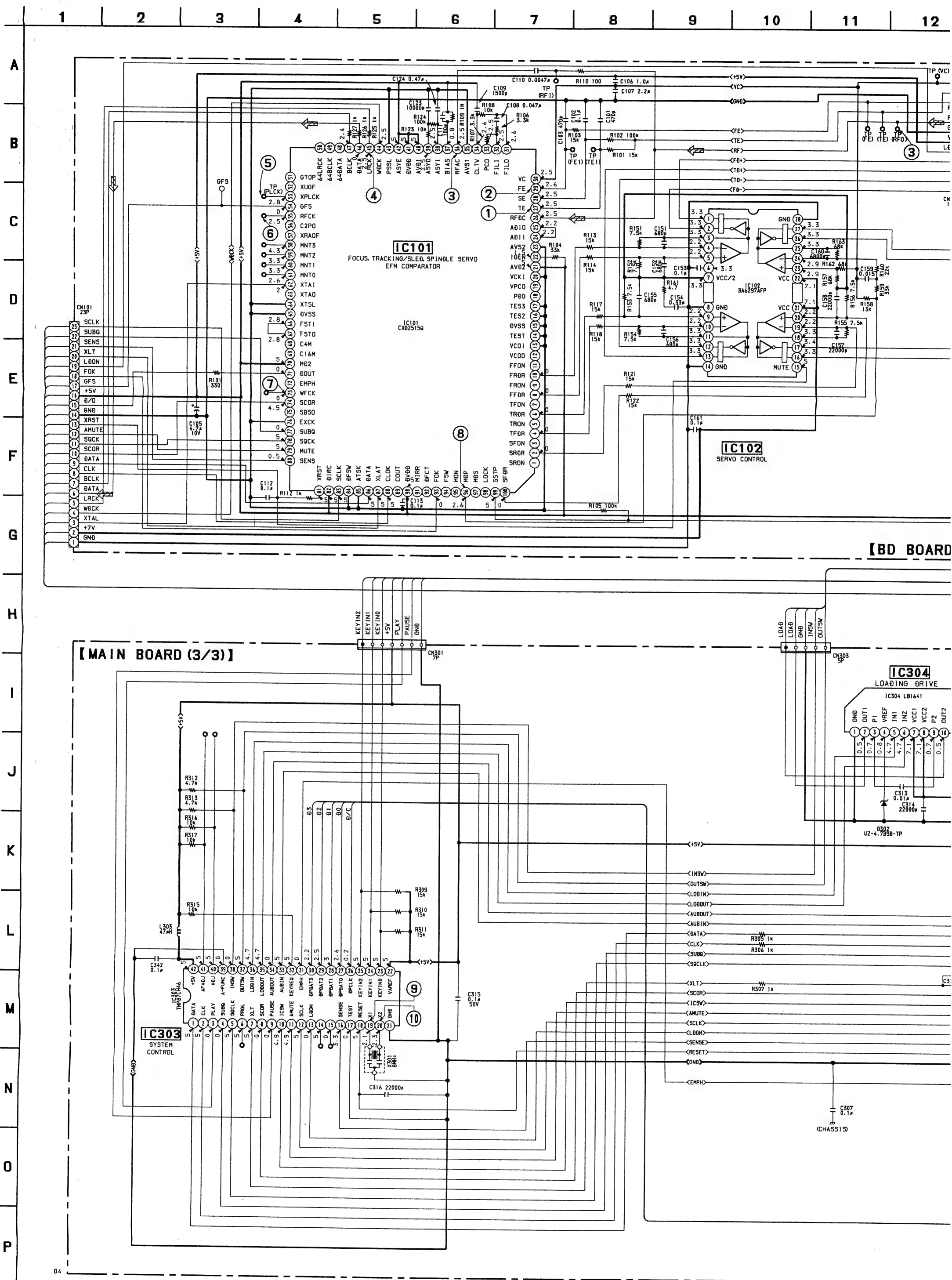
【 CD PANEL BOARD 】

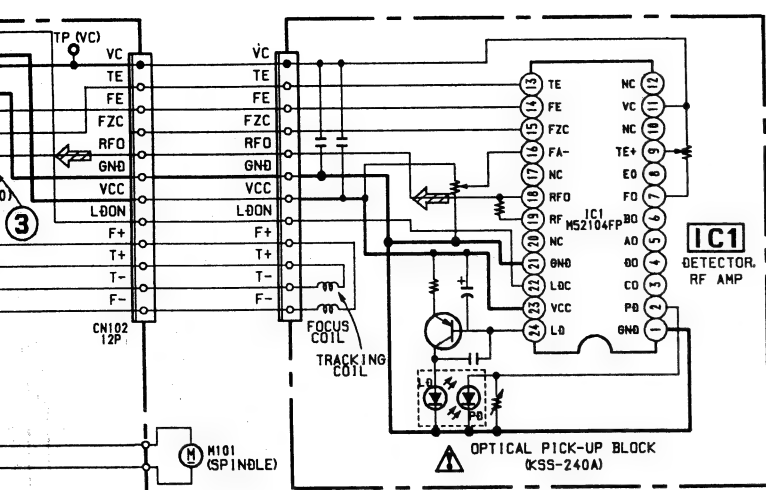


【H.P. BOARD】

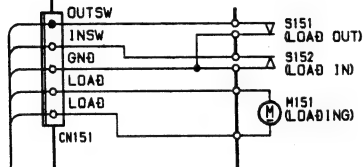


5-7. SCHEMATIC DIAGRAM—CD SECTION— • Refer to page 54 for IC Block Diagrams.

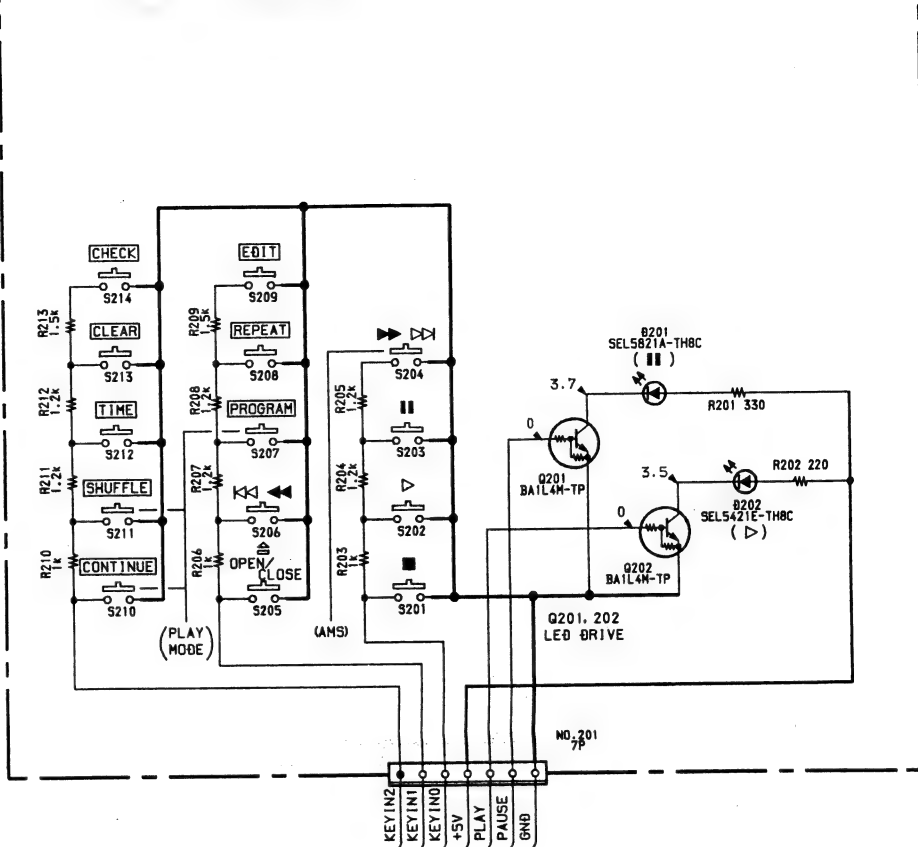




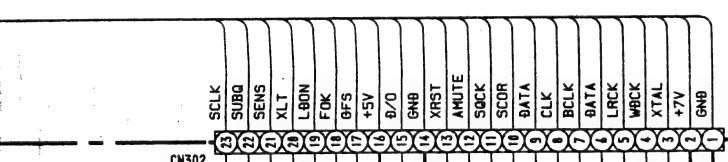
### LOADING BOARD



### [CD PANEL BOARD]



### BOARD



### IC304

IC304 LB1641



11

12

### IC308

IC308 74LS04

OSC

### IC301

IC301 BA3962

+5V/+7V REG.

### IC302

IC302 L78L05

+5V REG.

### IC307

IC307 TL431

D/A CONVERTER

### IC305

IC305 25C2785TP-HFE

LPF

### IC306

IC306 25C2785TP-HFE

BUFFER

(C) MAIN BOARD (2/3)  
(See page 36.)

(B) MAIN BOARD (2/3)  
(See page 36.)









**B** TO  
MAIN BOARD (2/3)  
(See page 36.)

<p><b>1</b></p> <p>APPROX. 400mVp-p IC101 (27) PLAY</p>	<p><b>7</b></p> <p>IC101 (73)</p>
<p><b>2</b></p> <p>APPROX. 150mVp-p IC101 (29) PLAY</p>	<p><b>8</b></p> <p>IC101 (96) PLAY</p>
<p><b>3</b></p> <p>IC101 (36) PLAY (RFO)</p>	<p><b>9</b></p> <p>IC303 (19)</p>
<p><b>4</b></p> <p>IC101 (45)</p>	<p><b>10</b></p> <p>IC303 (20)</p>
<p><b>5</b></p> <p>IC101 (53) PLAY</p>	<p><b>11</b></p> <p>IC308 (3)</p>
<p><b>6</b></p> <p>IC101 (55)</p>	<p><b>12</b></p> <p>IC308 (4, 5)</p>

- All capacitors are in  $\mu\text{F}$  unless otherwise noted.  $\text{pF}$ :  $\mu\mu\text{F}$  50WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in  $\Omega$  and 1/4 W or less unless otherwise specified.

**Note :**  
Les composants identifiés par une marque  sont critiques pour la sécurité.  
Ne les remplacer que par une pièce portant le numéro spécifié.

-  : B+ Line
-  : B- Line
- Voltage is dc with respect to ground under no-signal conditions.
- no mark: CD STOP
- Voltages are taken with a VOM (Input Impedance 10MΩ). Voltage variations may be noted due to normal production tolerances.
- Waveforms are taken with a oscilloscope. Voltage variations may be noted due to normal production tolerances.
- Circled numbers refer to waveforms.
- **Signal path.**  
 : CD





5-8. SCHEMATIC DIAGRAM—POWER SECTION— • Refer to page 54 for IC Block Diagrams.


Note:






- All capacitors are in  $\mu\text{F}$  unless otherwise noted. pF:  $\mu\text{F}$  50WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in  $\Omega$  and 1/4 W or less unless otherwise specified.

Note:

The components identified by mark  or dotted line with mark  are critical for safety. Replace only with part number specified.

Note:

Les composants identifiés par une marque  sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

- — : B+ Line
- - - - : B- Line
- Voltage is dc with respect to ground under no-signal (detuned) conditions.
- no mark: FM
- Voltages are taken with a VOM (Input Impedance 10M $\Omega$ ). Voltage variations may be noted due to normal production tolerances.
- Signal path.
  -  : FM
  -  : PB (DECK A)  : CD
  -  : PB (DECK B)  : PHONO/VIDEO
- Abbreviation  
AEP1: AEP unit with PHONO POWER SOURCE

1 2 3 4 5 6

A

B

C

D

E

F

G

H

I

J

K

L

M

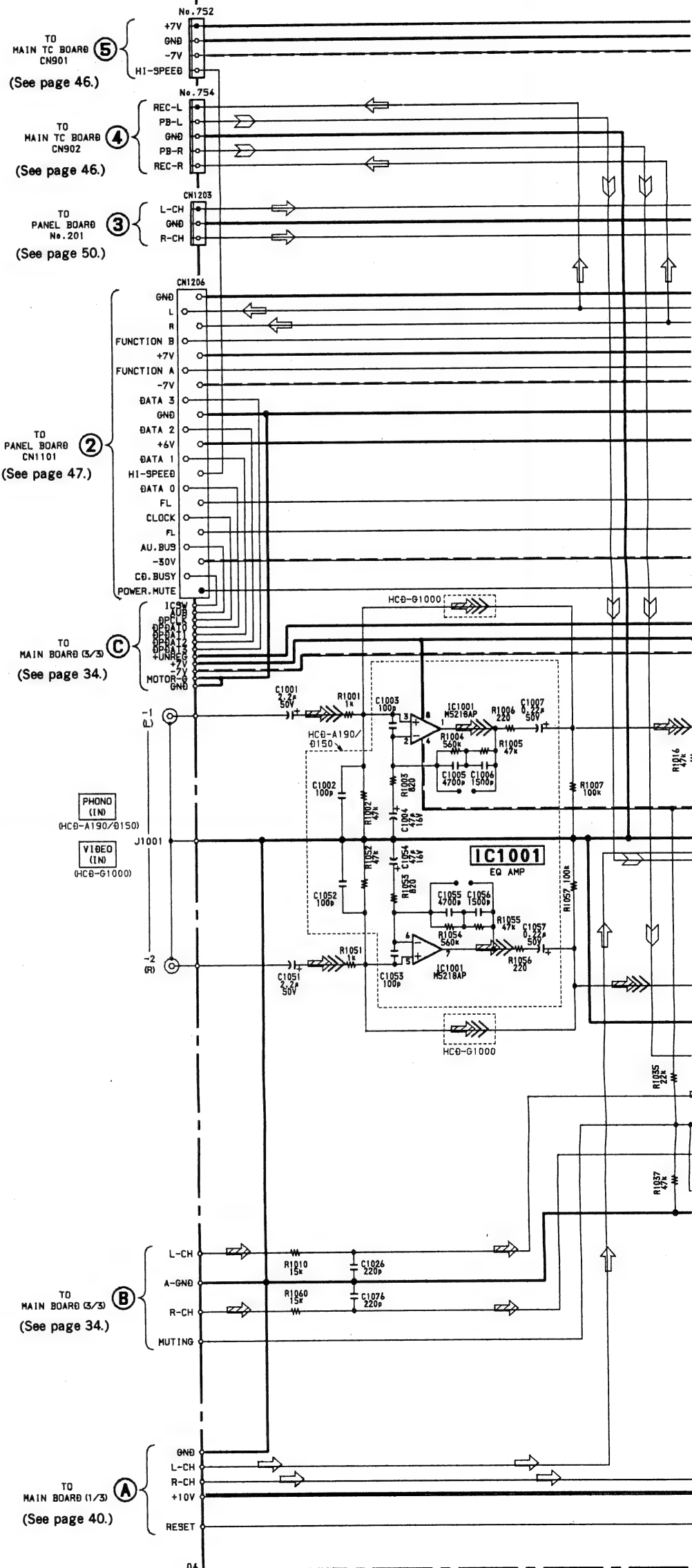
N

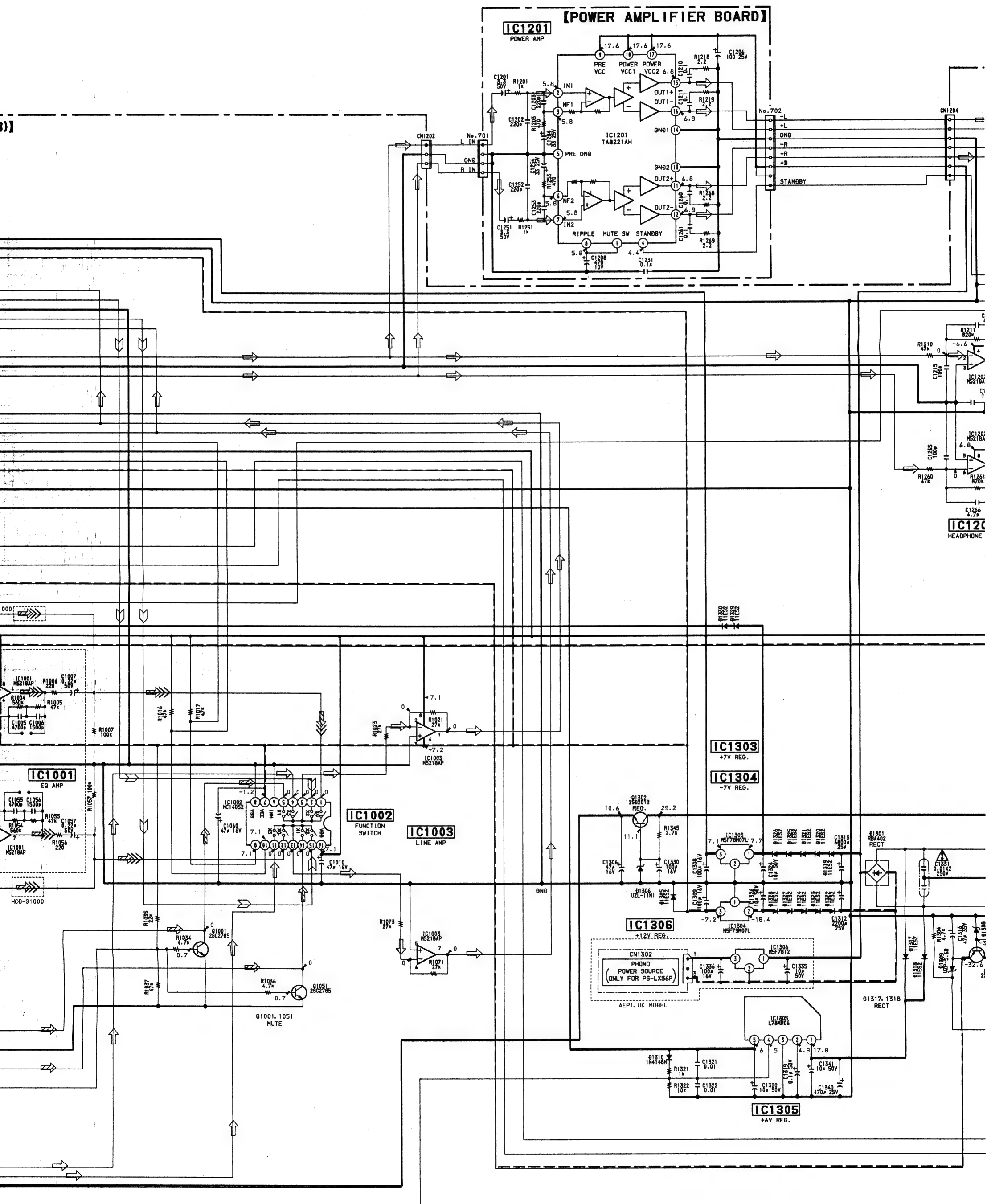
O

P

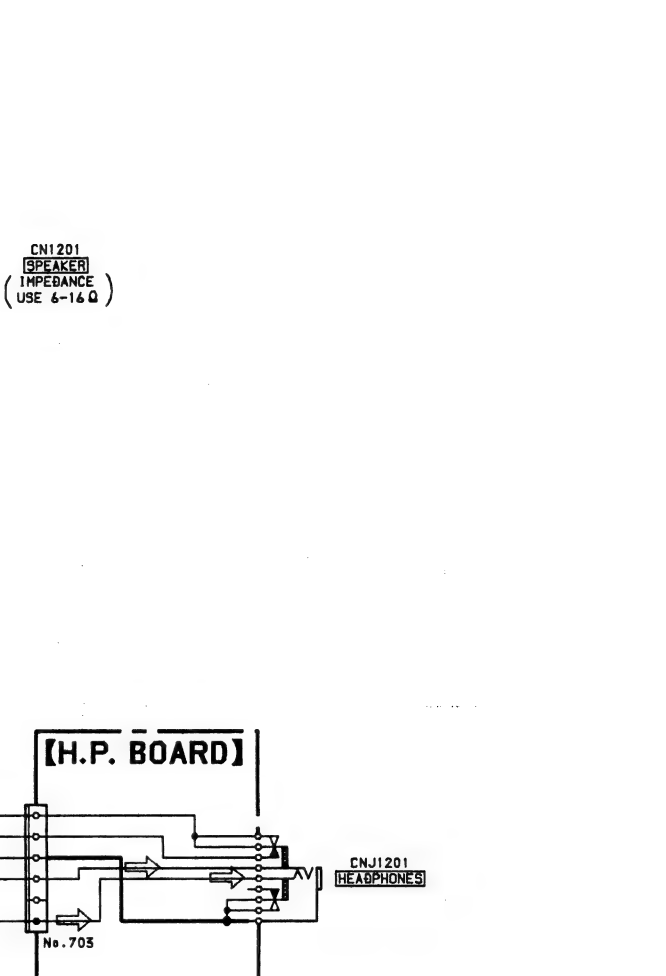
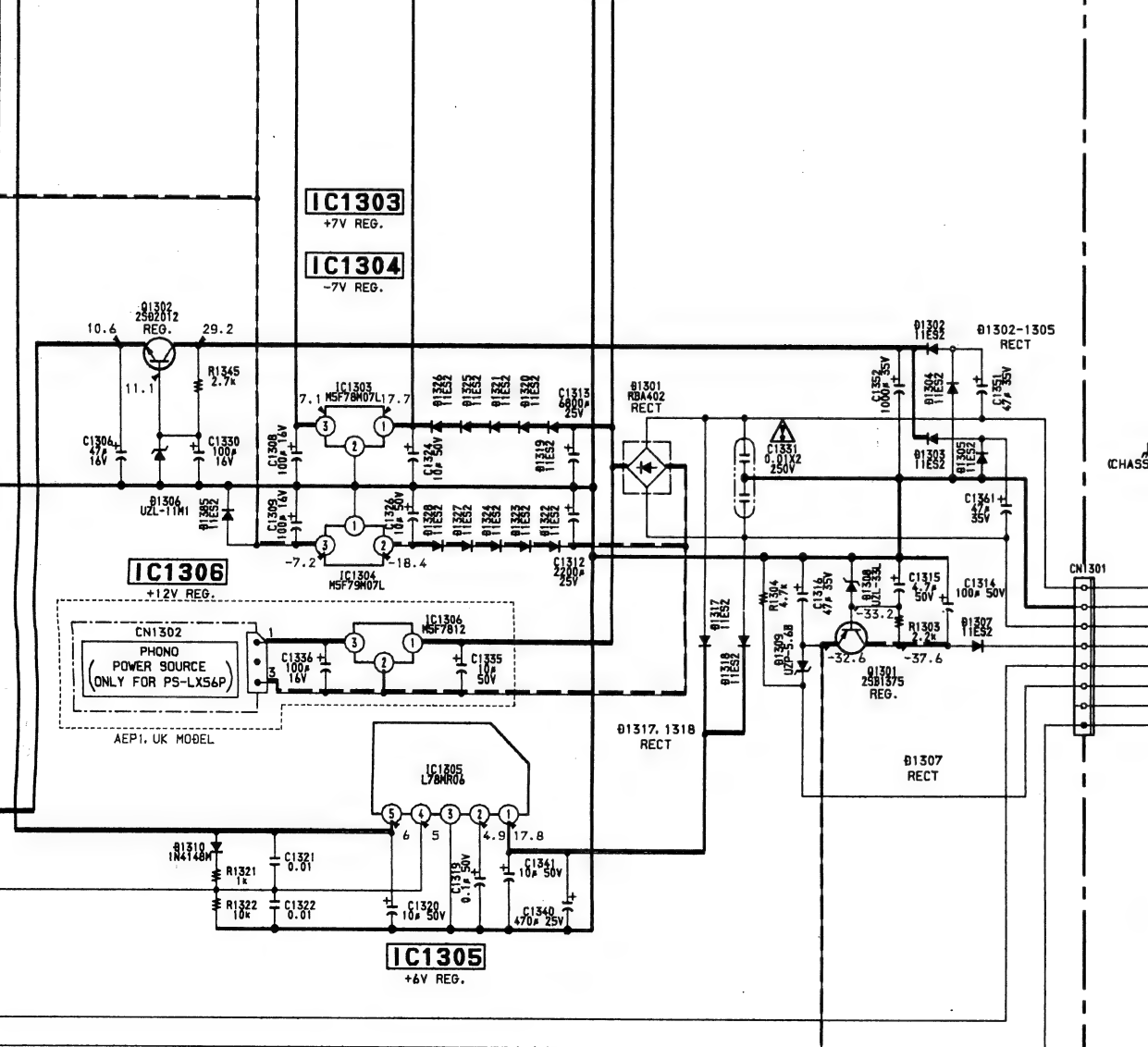
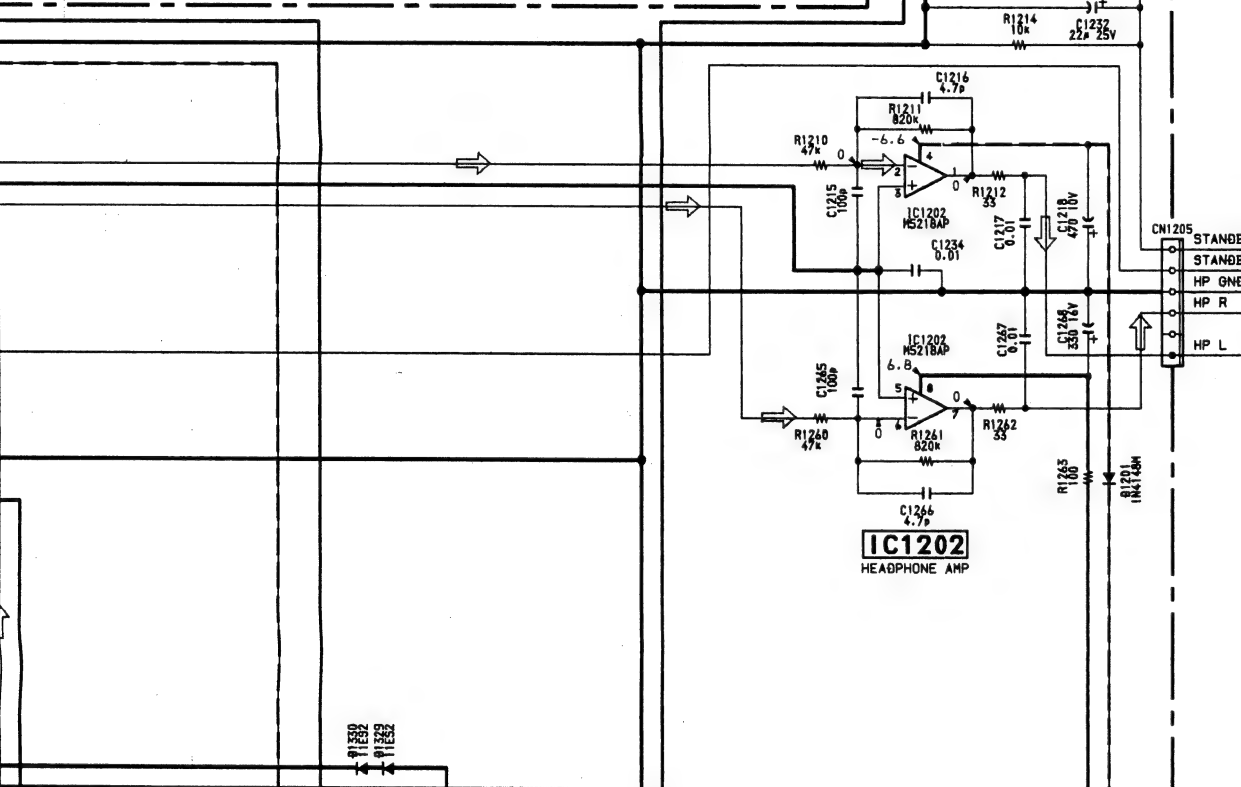
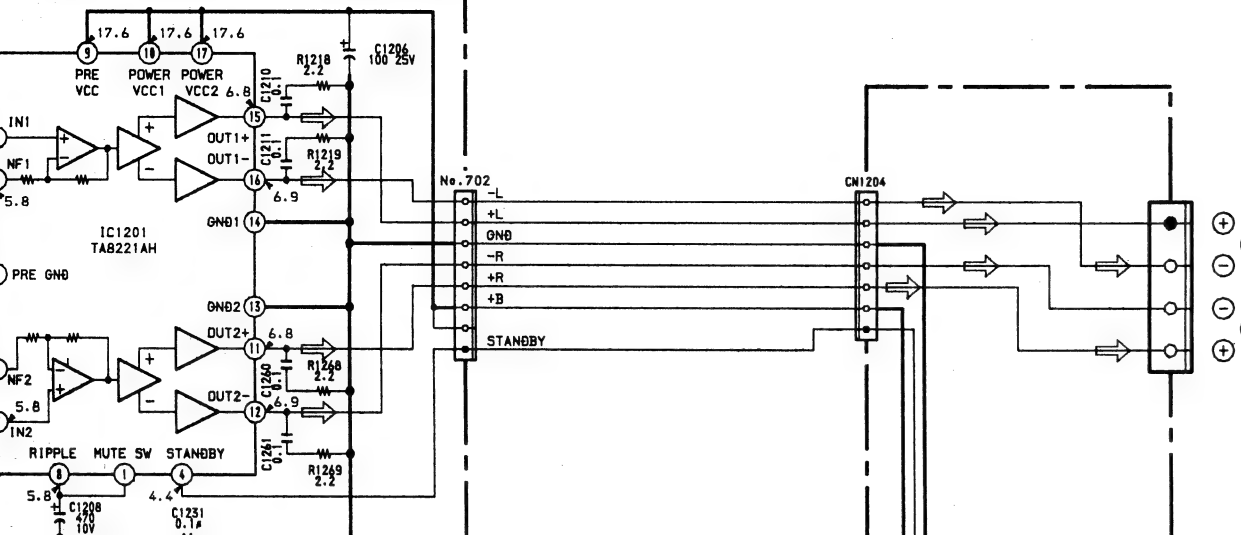
Q

【MAIN BOARD (2/3)】

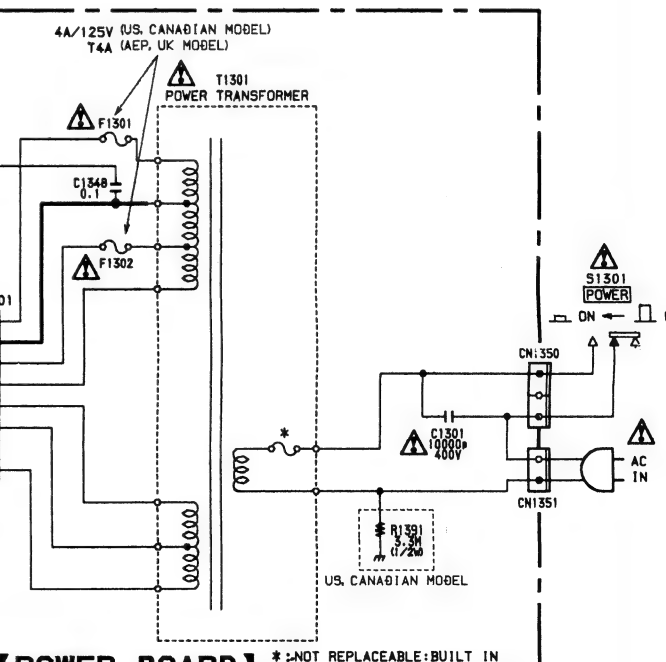
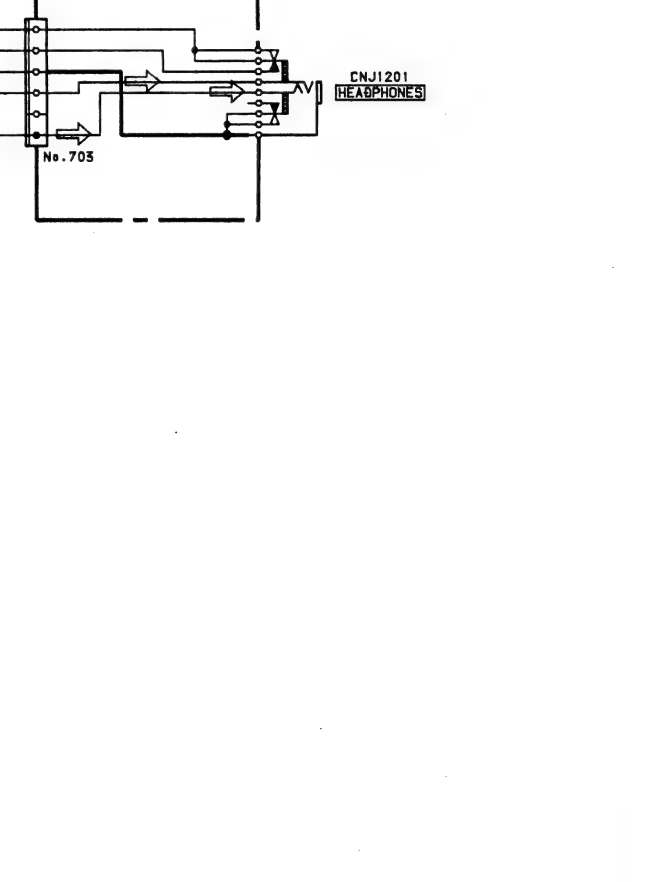




**【POWER AMPLIFIER BOARD】**

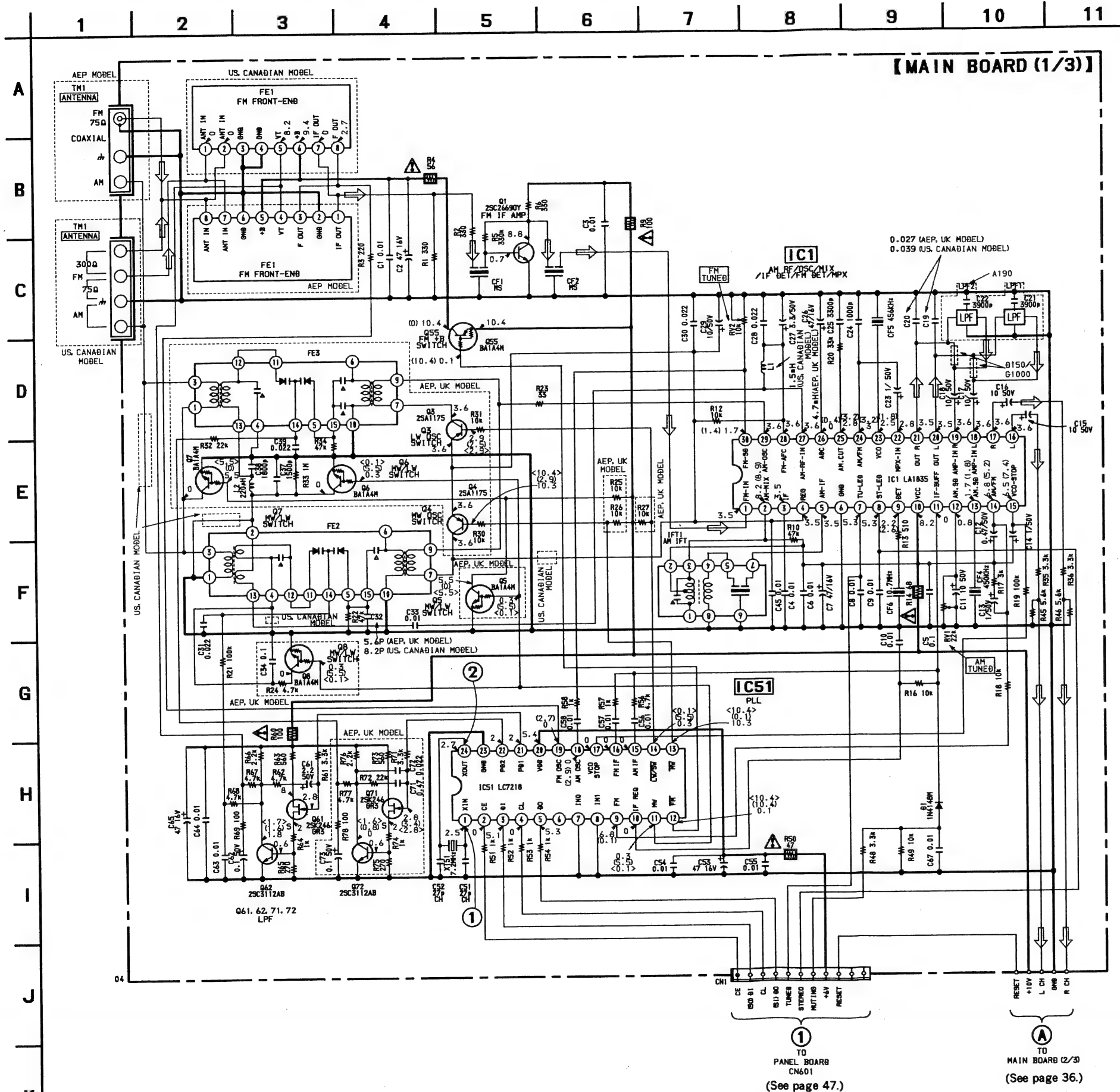


**【H.P. BOARD】**



**【POWER BOARD】**

5-9. SCHEMATIC DIAGRAM—TUNER SECTION— • Refer to page 54 for IC Block Diagrams.



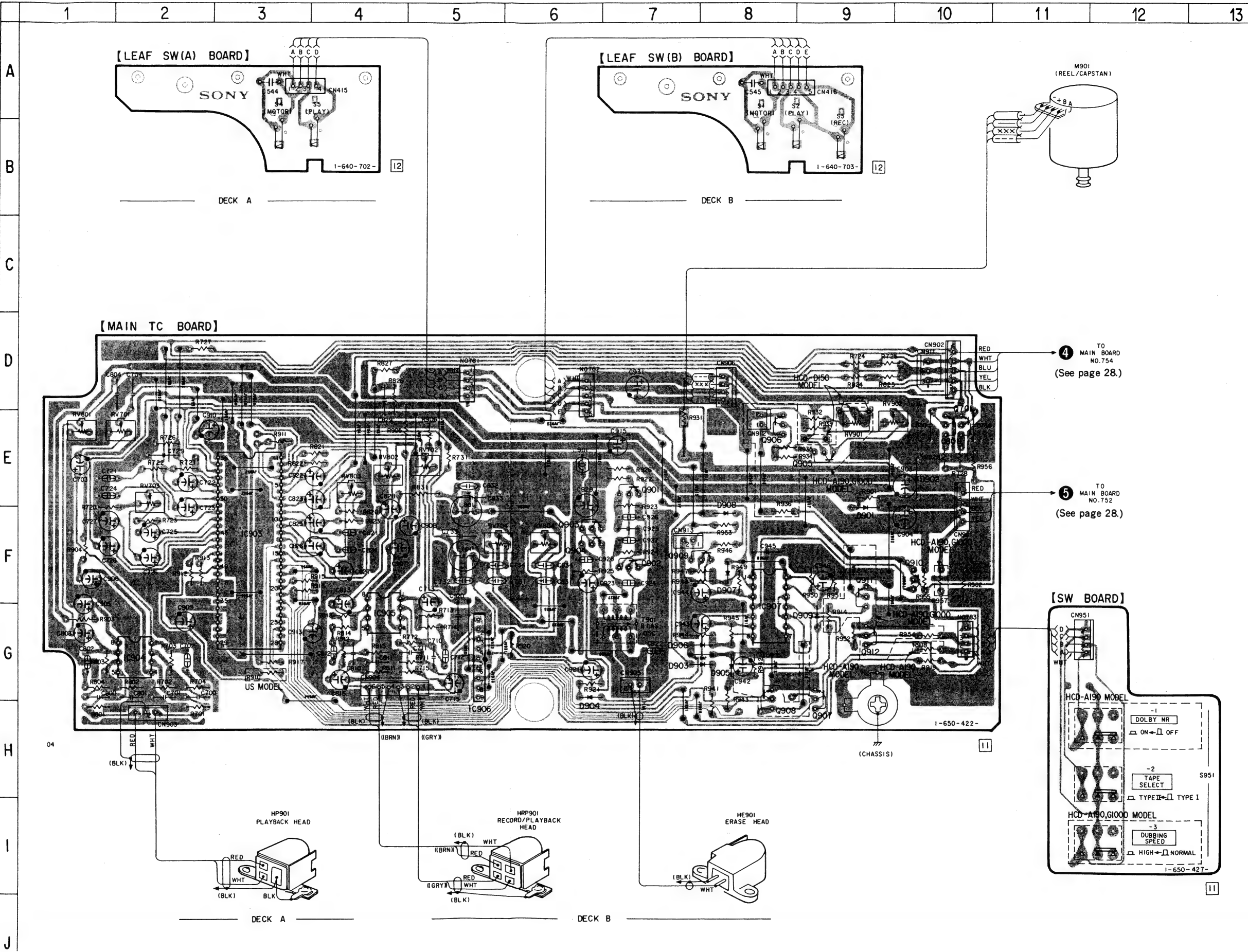


5-10. PRINTED WIRING BOARDS—DECK SECTION— • Refer to page 24 for Semiconductor Lead Layouts.

• Semiconductor Location

Ref. No.	Location
D901	E-9
D902	E-10
D903	G-7
D904	G-6
D905	G-8
D906	G-7
D907	F-8
D908	F-8
D909	G-9
IC903	F-3
IC904	G-2
IC905	G-4
IC906	G-5
IC907	F-8
Q701	E-10
Q801	E-10
Q901	E-7
Q902	F-7
Q903	F-6
Q904	F-6
Q905	E-9
Q906	E-8
Q907	G-9
Q908	G-8
Q909	F-7
Q910	F-9
Q911	F-9
Q912	G-9

Note :  
• ○ : parts extracted from the component side.

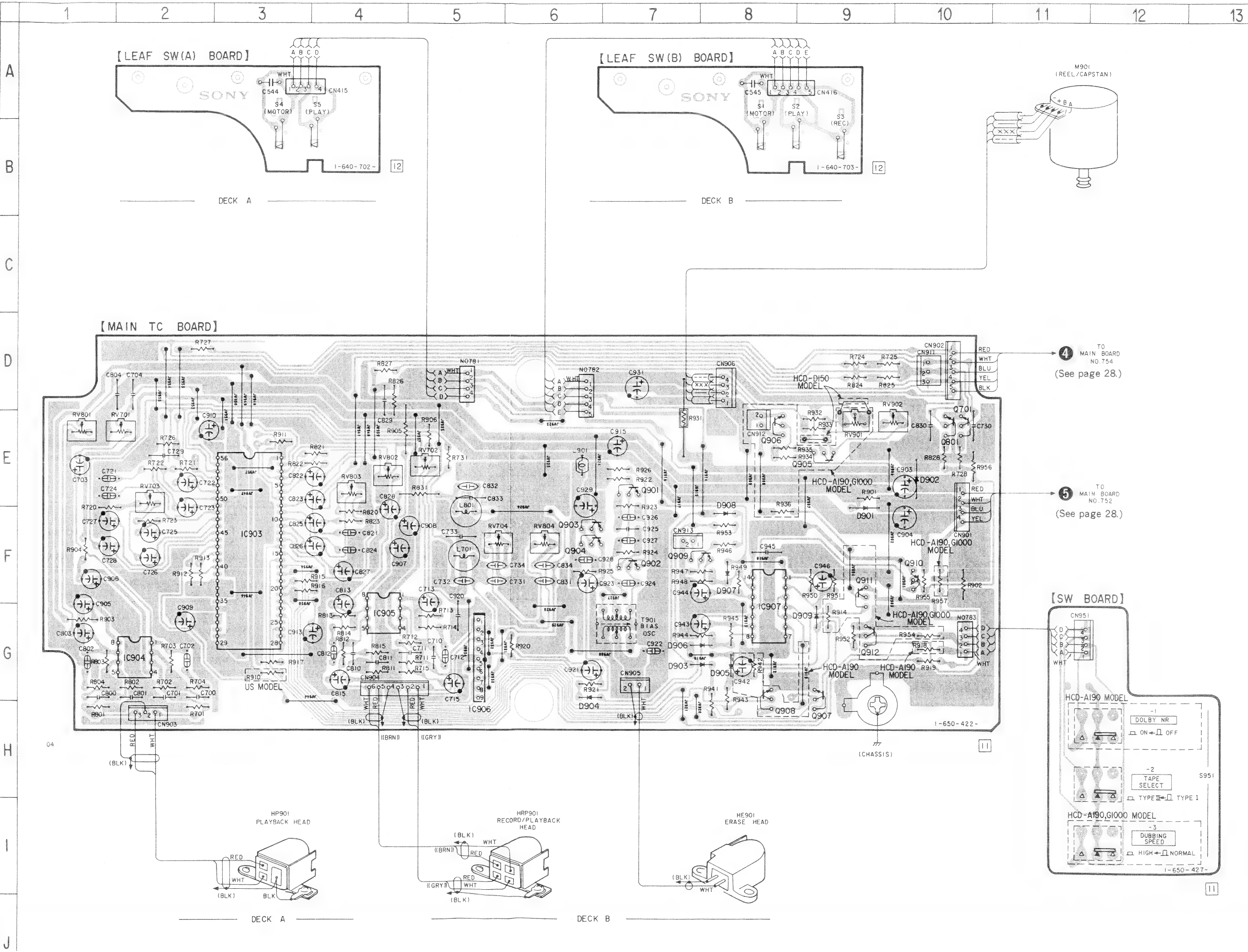


5-10. PRINTED WIRING BOARDS—DECK SECTION— • Refer to page 24 for Semiconductor Lead Layouts.

• Semiconductor Location

Ref. No.	Location
D901	E-9
D902	E-10
D903	G-7
D904	G-6
D905	G-8
D906	G-7
D907	F-8
D908	F-8
D909	G-9
IC903	F-3
IC904	G-2
IC905	G-4
IC906	G-5
IC907	F-8
Q701	E-10
Q801	E-10
Q901	E-7
Q902	F-7
Q903	F-6
Q904	F-6
Q905	E-9
Q906	E-8
Q907	G-9
Q908	G-8
Q909	F-7
Q910	F-9
Q911	F-9
Q912	G-9

Note :  
• — : parts extracted from  
the component side.

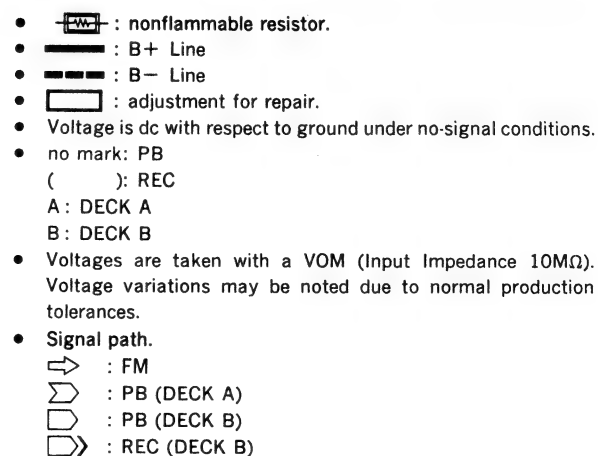




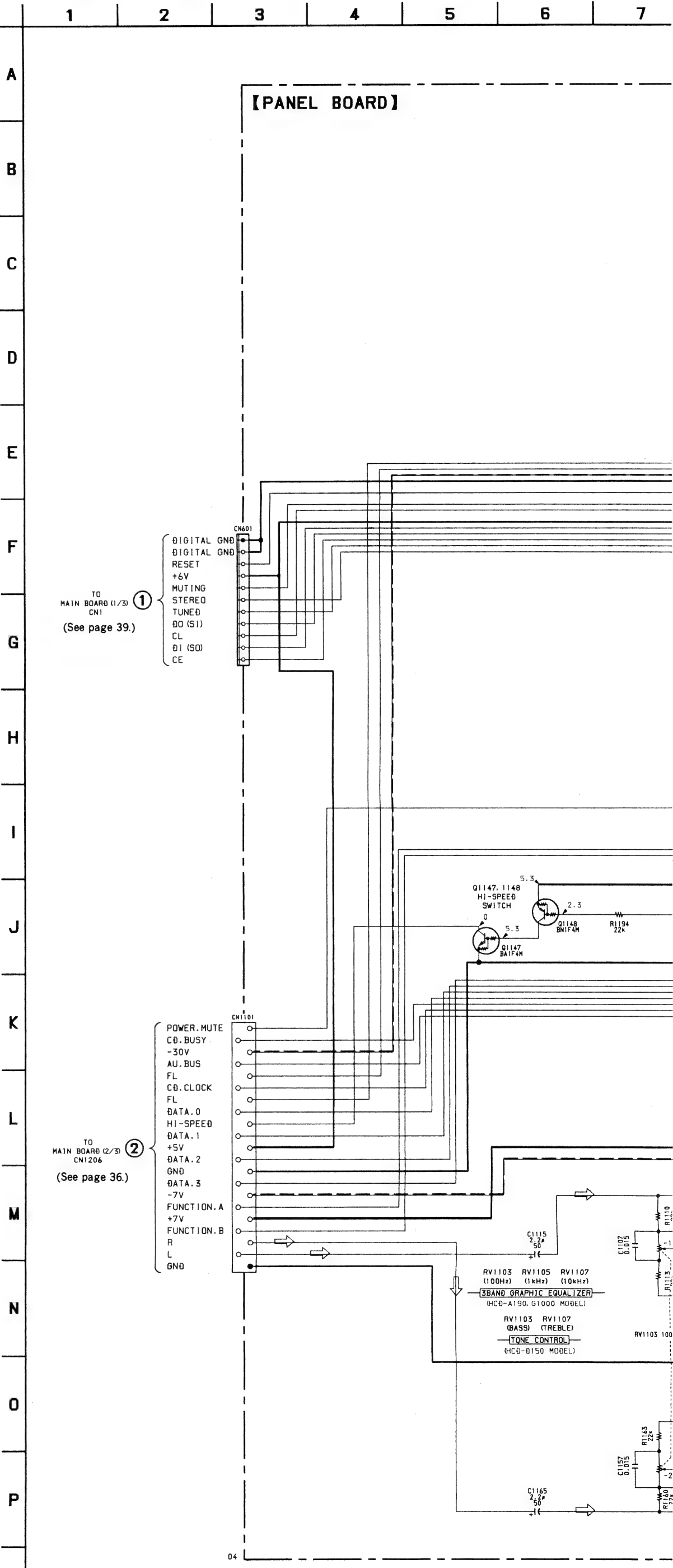




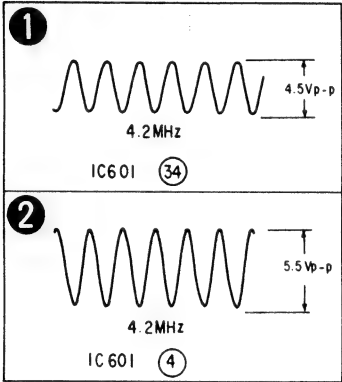




5-12. SCHEMATIC DIAGRAM—PANEL SECTION— • Refer to page 54 for IC Block Diagrams.

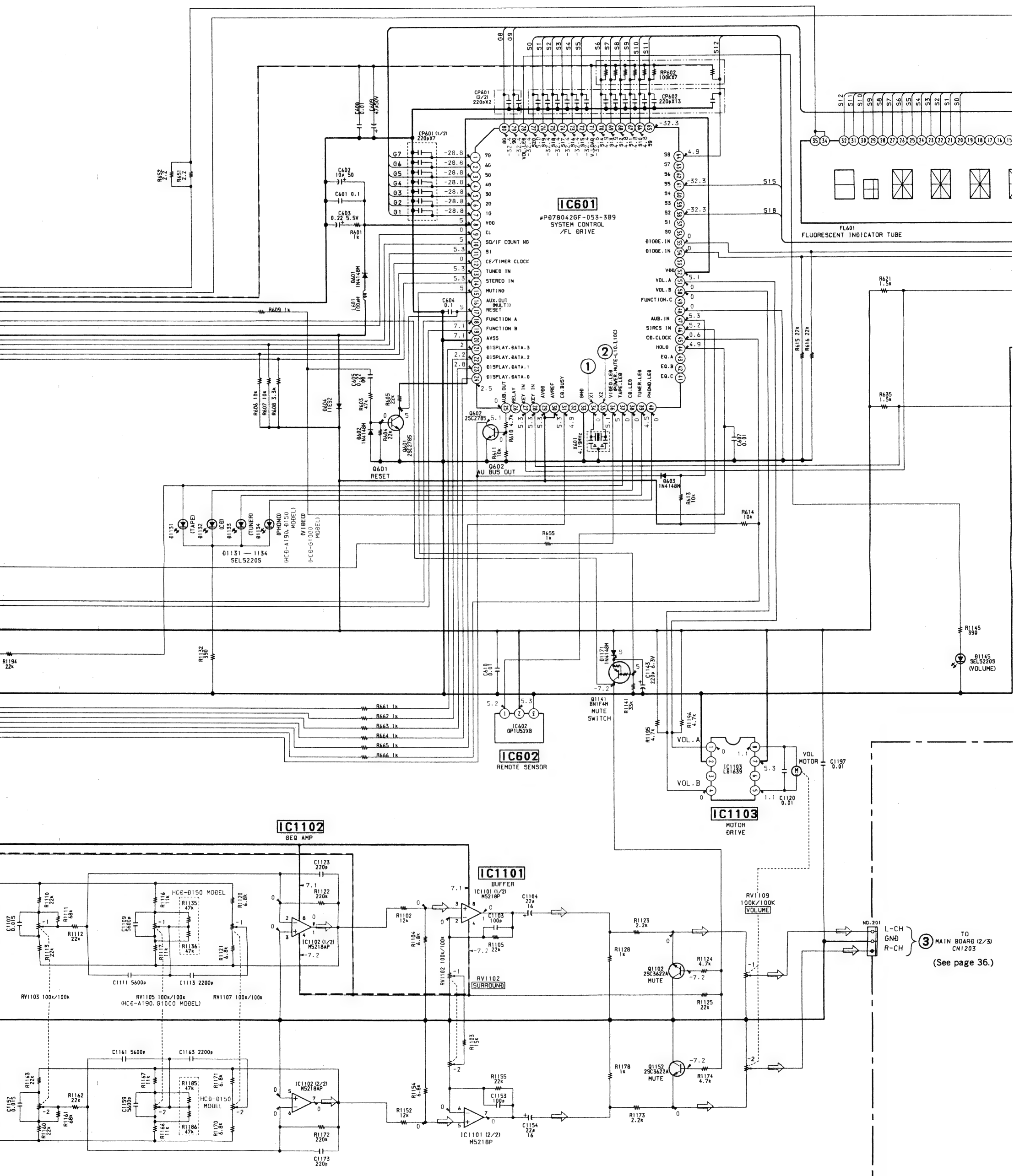


• Waveforms



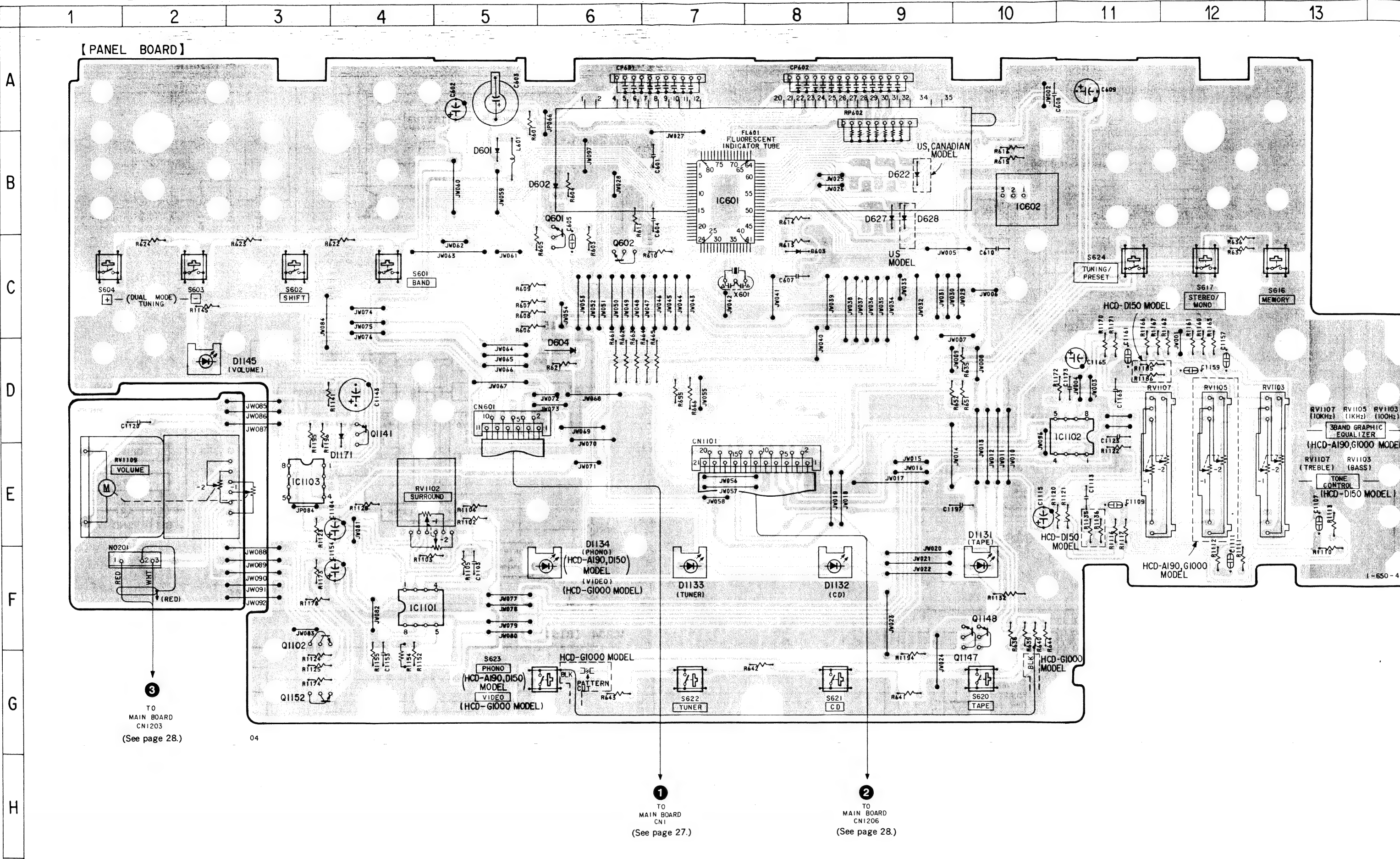
Note :

- All capacitors are in  $\mu$ F unless otherwise noted. pF :  $\mu$ F 50WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in  $\Omega$  and 1/4 W or less unless otherwise specified.
- $\Delta$  : internal component.
- — : B+ Line
- - - - : B- Line
- Voltage and waveforms are dc with respect to ground under no-signal (detuned) conditions.
- no mark: FM
- Voltages are taken with a VOM (Input Impedance 10M $\Omega$ ). Voltage variations may be noted due to normal production tolerances.
- Waveforms are taken with a oscilloscope. Voltage variations may be noted due to normal production tolerances.
- Circled numbers refer to waveforms.
- Signal path.  
⇒ : FM

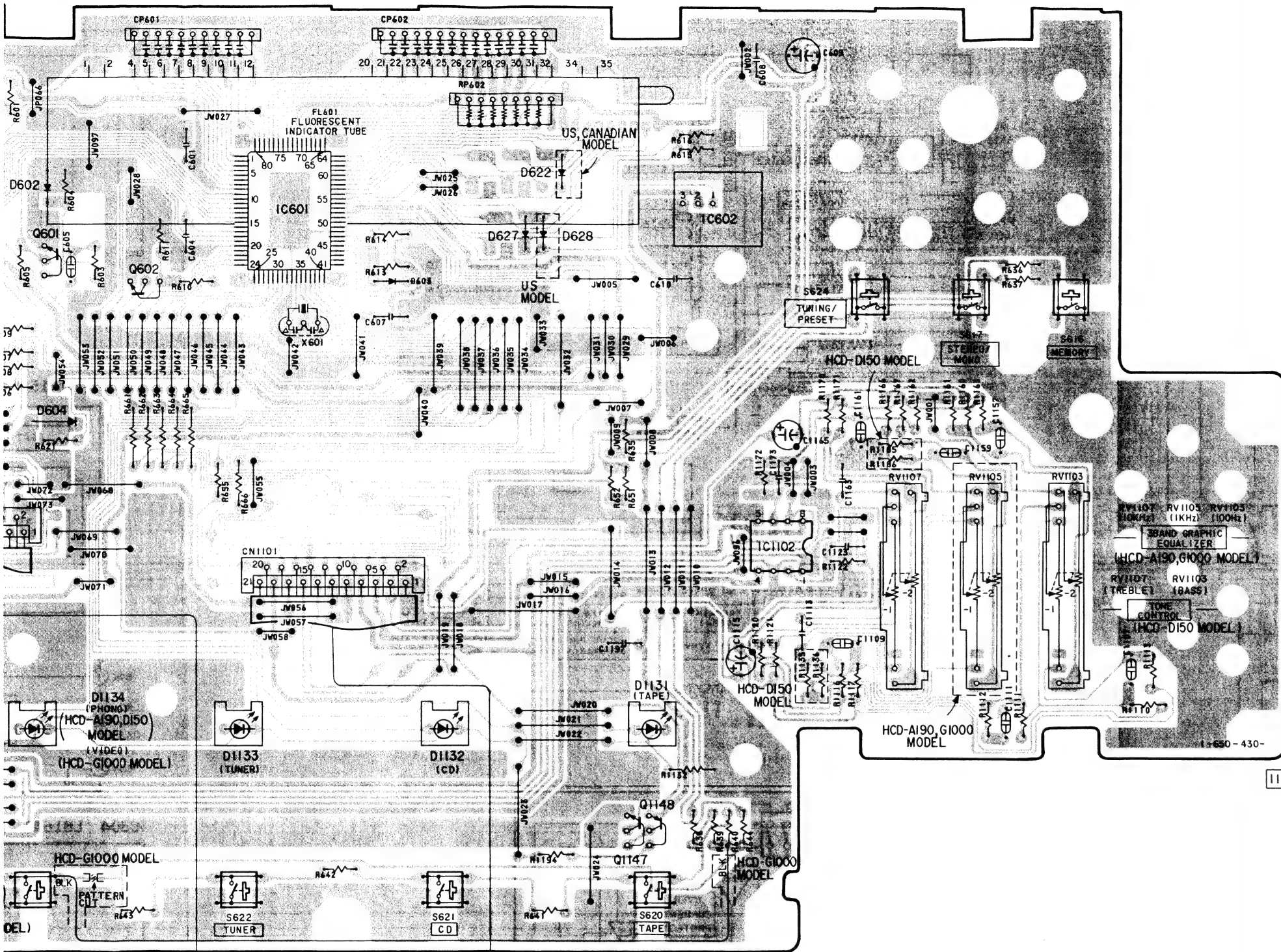








6	7	8	9	10	11	12	13	14
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- **Semiconductor Location**

Ref. No.	Location
D601	B-5
D602	B-6
D603	C-8
D604	D-6
D622	B-9
D627	B-9
D628	B-9
D1131	F-10
D1132	F-8
D1133	F-7
D1134	F-6
D1145	D-2
D1171	D-4
IC601	B-7
IC602	B-10
IC1101	F-4
IC1102	D-11
IC1103	E-3
Q601	B-6
Q602	C-6
Q1102	F-3
Q1141	D-4
Q1147	F-10
Q1148	F-10
Q1152	G-3

**Note :**

- ○ — : parts extracted from the component side.

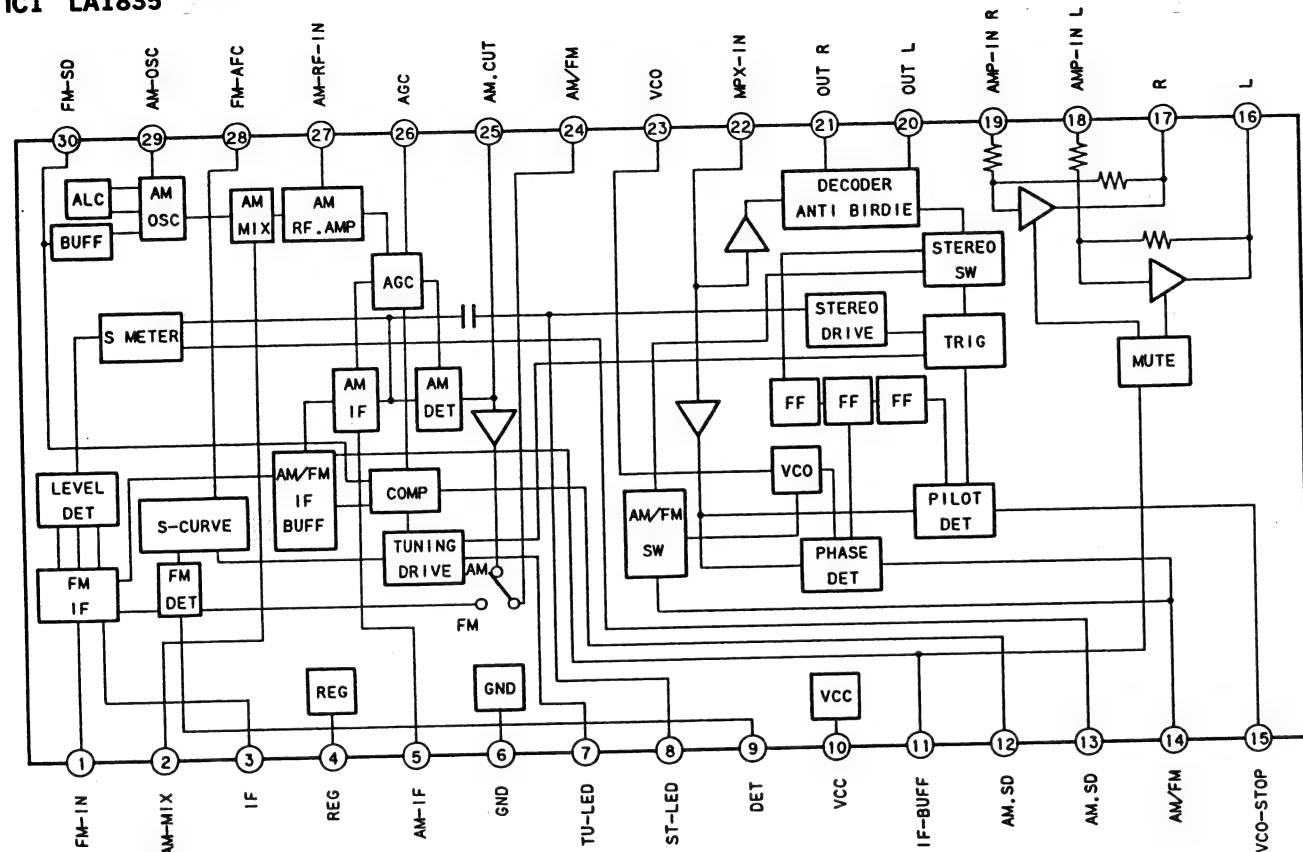
**1**  
TO  
MAIN BOARD  
CNI  
(See page 27.)

**2**  
TO  
MAIN BOARD  
CN1206  
(See page 28.)

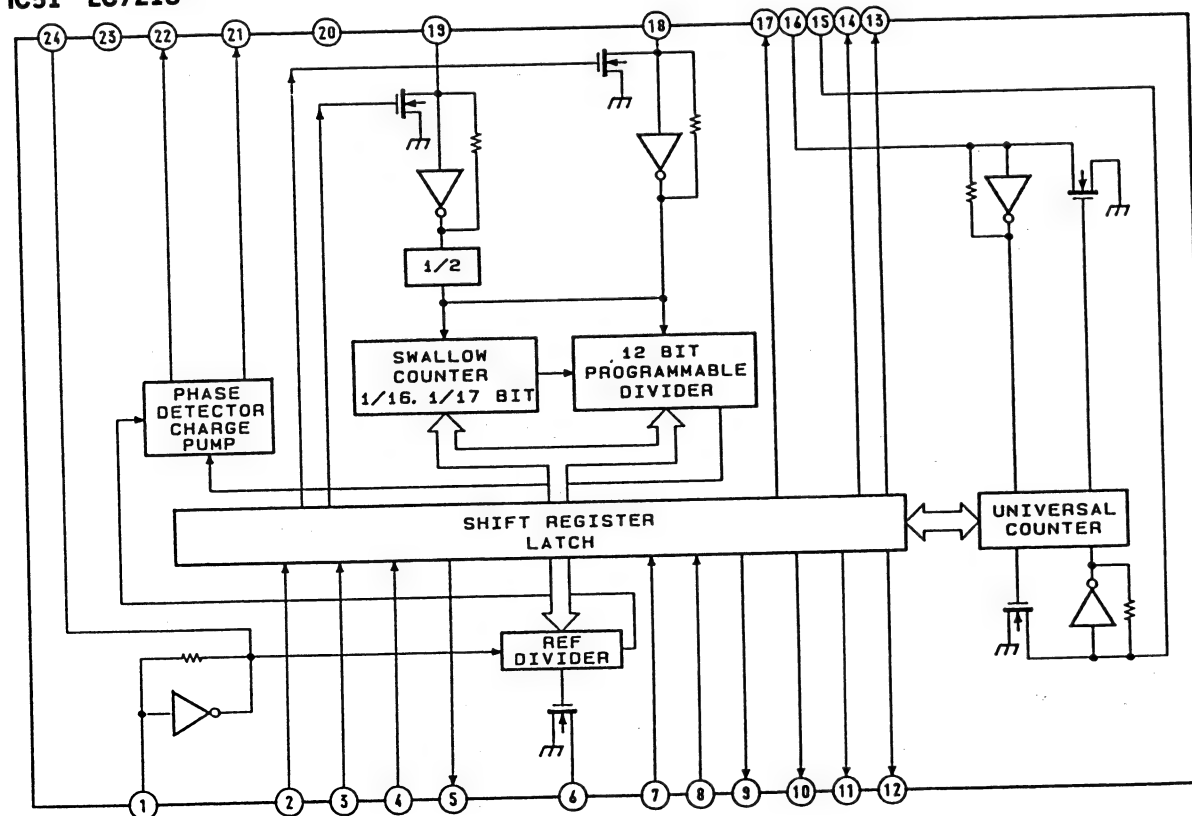


• IC Block Diagrams

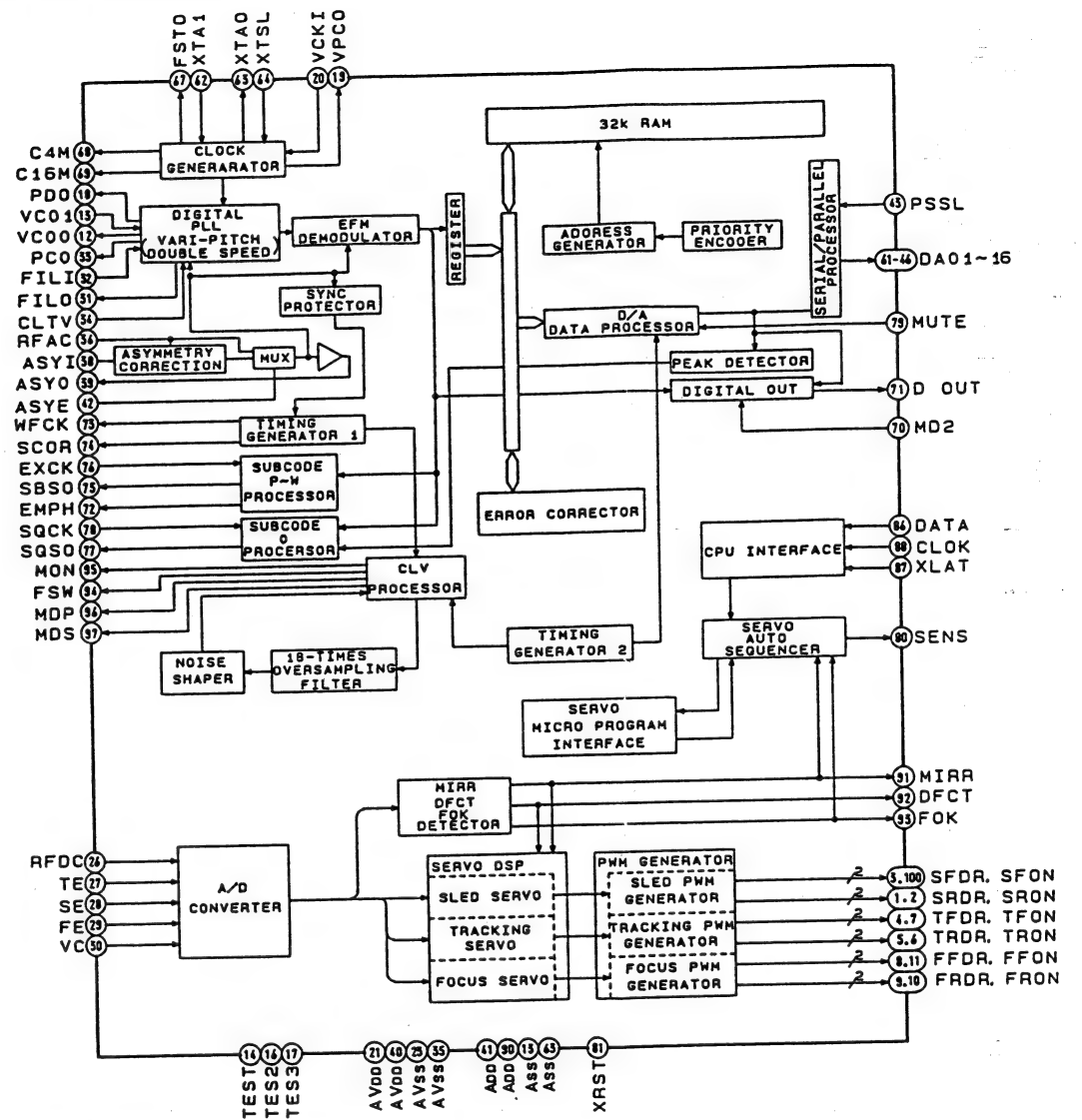
IC1 LA1835



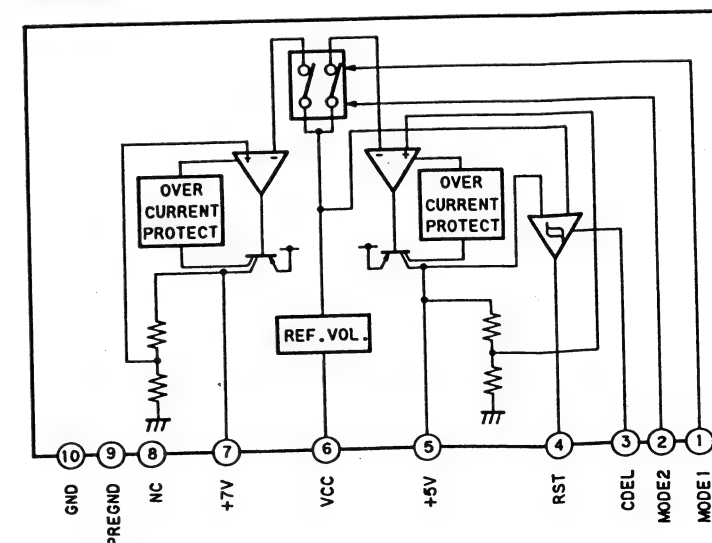
IC51 LC7218



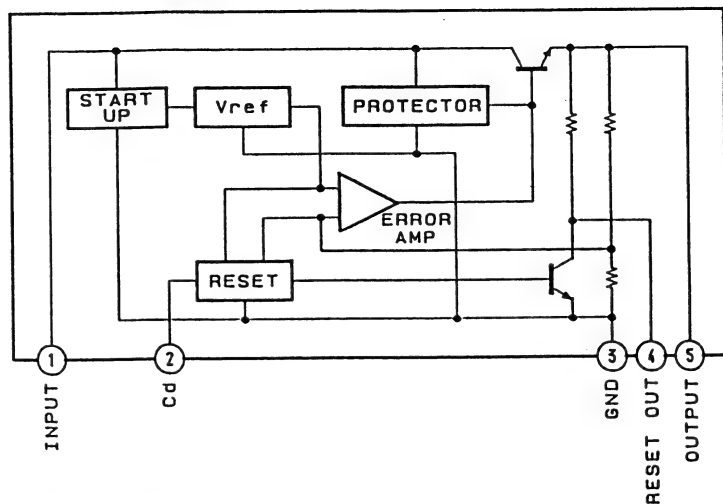
IC101 CXD2515Q



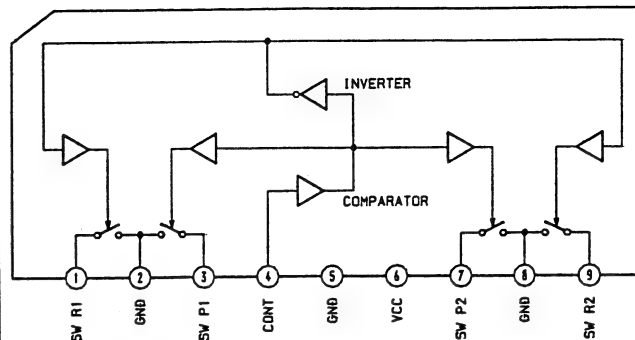
IC301 BA3962



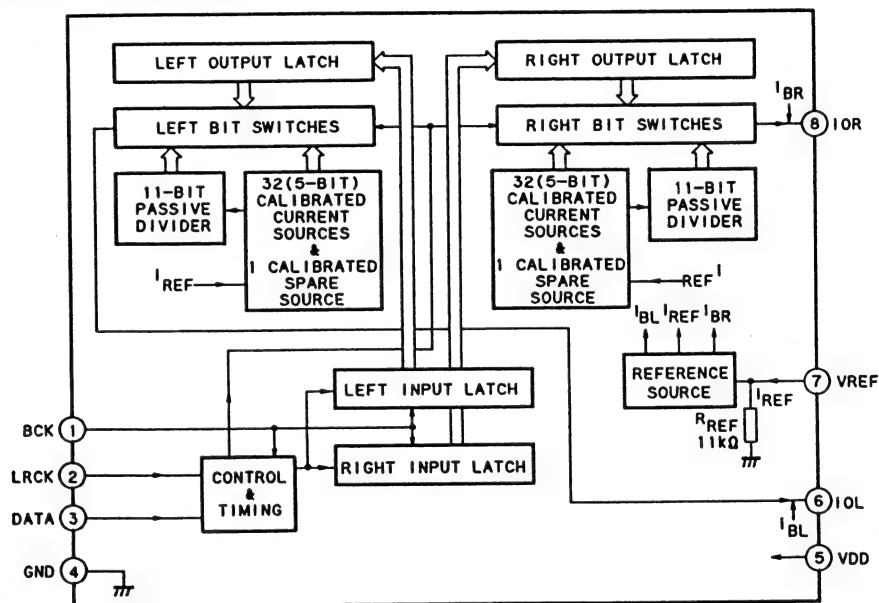
IC302 L78LR05  
IC1305 L78MR06



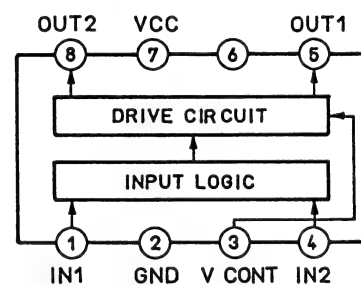
IC906  $\mu$ PC1330HA



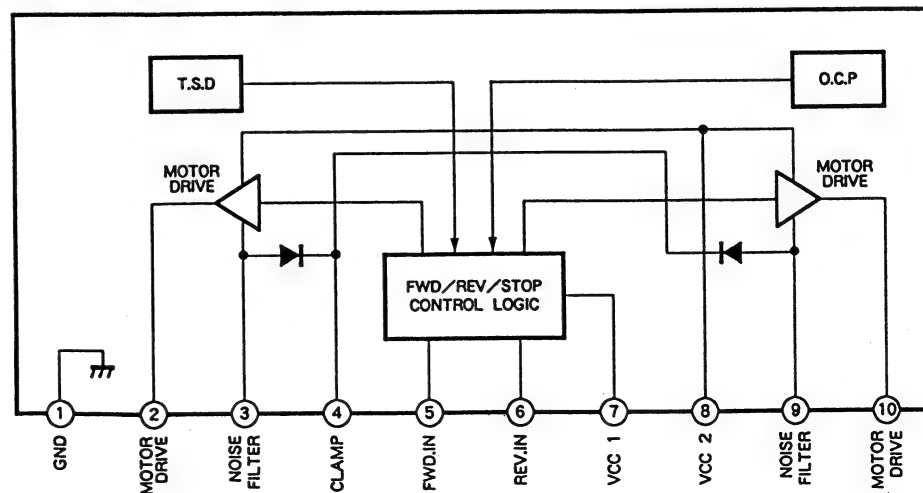
IC307 TDA1545Q



IC1103 LB1639



IC304 LB1641





## 5-14. PIN DESCRIPTIONS

### • IC303 TMP87CH46N-4067

Pin No.	Pin Name	I/O	Pin Description
1	DATA	O	Command data to CXD2515Q.
2	CLK	O	Command clock to CXD2515Q.
3	PLAY	O	LED of PLAY.
4	SUBQ	I	To Q code output of CXD2515Q.
5	SQCLK	O	Clock of on read Q code.
6	PRGL		Not used.
7	XLT	O	For CXD2515Q latch.
8	SCOR	I	Large frame synchronization signal. 75Hz.
9	PAUSE	O	LED of PAUSE.
10	ICSW	O	CD power supply control pin. OFF : L, ON : H.
11	AMUTE	O	Mute. To CXD2515Q.
12	SCLK	O	Servo mode for read clock.
13	LDON	O	Laser diode ON/OFF.
14			Not used.
15			Not used.
16	SENSE	I	SENSE of CXD2515Q.
17	TEST	I	Connect to GND.
18	RESET	I	Reset pin of microcomputer.
19	X1	I	Oscillator connecting input pin. 8MHz.
20	X2	O	Oscillator connecting output pin. 8MHz.
21	GND		GND
22	VAREF	I	Reference voltage of A/D change.
23	KEYIN0	I	A/D key input
24	KEYIN1	I	A/D key input
25	KEYIN2	I	A/D key input
26	DPCLK	O	Display clock
27	DPDAT0	O	Display data
28	DPDAT1	O	Display data
29	DPDAT2	O	Display data
30	DPDAT3	O	Display data
31	EMPH	O	Emphasis control
32	KEYREQ	I	Key request
33	AUBIN	I	AU BUS input pin
34	AUBOUT	O	AU BUS output pin
35	LODOUT	O	Tray out
36	LODIN	O	Tray in
37	OUTSW	I	Tray out switch
38	INSW	I	Tray in switch
39	A-FUNC	I	Auto function ON/OFF select
40	ADJ	I	CD test mode pin (ADJ). Normally, 5V pull up.
41	AFADJ	I	CD test mode pin (AFADJ). Normally, 5V pull up.
42	+5V		+5V power supply pin

• IC601  $\mu$ PD78042GF-053-3B9

Pin No.	Pin Name	I/O	Pin Description
1	7G	O	FL tube digit output
2	6G	O	FL tube digit output
3	5G	O	FL tube digit output
4	4G	O	FL tube digit output
5	3G	O	FL tube digit output
6	2G	O	FL tube digit output
7	1G	O	FL tube digit output
8	VDD		Microcomputer power (5V)
9	CL	O	Serial clock output to LC7218 (PLL IC).
10	SO/IF COUNT NG	O	Serial data output to LC7218 (PLL IC).
11	SI	I	Serial data input from LC7218 (PLL IC).
12	CE/TIMER CLOCK	I	Chip enable input from LC7218 (PLL IC).
13	TUNED IN	I	Modulation signal from tuner block. (L...Field)
14	STEREO IN	I	Stereo signal from tuner block. (L...FM STEREO received)
15	MUTING	O	Audio mute (L : Mute)
16	AUX. OUT		Not used.
17	RESET	—	Microcomputer reset pin
18	FUNCTION A	O	Function control
19	FUNCTION B	O	Function control
20	AVSS	—	A/D GND for key input.
21	DISPLAY. DATA. 3	I	CD display data bit 3
22	DISPLAY. DATA. 2	I	CD display data bit 2
23	DISPLAY. DATA. 1	I	CD display data bit 1
24	DISPLAY. DATA. 0	I	CD display data bit 0
25	AUB. OUT	O	AU BUS output
26	RELAY	—	Not used.
27	KEY IN1	I	Key input (A/D change line 1)
28	KEY IN0	I	Key input (A/D change line 0)
29	AVDD	—	A/D power for key input (5V)
30	AVREF	—	A/D reference voltage (5V)
31	CD. BUSY	I	At H, CD is Active. (At H, tuner is fundamentally not operated.)
32	—	—	Not used.
33	GND	—	Microcomputer GND
34	X1	—	Crystal connection pin for Main•clock oscillator.
35	X2	—	Crystal connection pin for Main•clock oscillator.
36	POWER. MUTE	O	Power mute (L : Mute)
37	TAPE. LED	O	Tape function LED
38	CD. LED	O	CD function LED
39	TUNER. LED	O	Tuner function LED
40	PHONO. LED	O	Phono function LED
41	EQ. C	—	Not used.
42	EQ. B	—	Not used.
43	EQ. A	—	Not used.
44	HOLD	I	Power cut detection pin (Normally : H, AC no connect : L)

Pin No.	Pin Name	I/O	Pin Description
45	CD. CLOCK	I	CD display data clock
46	SIRCS IN	I	SIRCS input
47	AUB. IN	I	AU BUS input
48	—	—	Connect to GND.
49	FUNCTION. C	—	Not used.
50	VOL. B	O	Volume control (VOL DOWN)
51	VOL. A	O	Volume control (VOL UP)
52	VDD	—	Microcomputer power (5V)
53	—	—	Not used.
54	DIODE. IN2	I	Distination•model discrimination input * 1
55	DIODE. IN1	I	Distination•model discrimination input * 1
56	S0	—	Not used.
57	S1	—	Not used.
58	S2	O	Distination•model discrimination output * 1
59	S3	—	Not used.
60	S4	—	Not used.
61	S5	O	Distination•model discrimination output * 1
62	S6	—	Not used.
63	S7	—	Not used.
64	S8	O	FL tube segment output
65	S9	O	FL tube segment output
66	S10	O	FL tube segment output
67	S11	O	FL tube segment output
68	S12	O	FL tube segment output
69	S13	O	FL tube segment output
70	S14	O	FL tube segment output
71	V. LOAD	—	Minus voltage for FL tube.
72	S15	O	FL tube segment output
73	S16	O	FL tube segment output
74	S17	O	FL tube segment output
75	S18	O	FL tube segment output
76	S19	O	FL tube segment output
77	S20	O	FL tube segment output
78	VOL. LED	O	Volume LED output
79	9G	O	FL tube digit output
80	8G	O	FL tube digit output

\* 1

[DIODE MATRIX] (Pin No. is IC601's pin No.)

Output Input	Pin <sup>(61)</sup>	Pin <sup>(60)</sup>	Pin <sup>(59)</sup>	Pin <sup>(58)</sup>	Pin <sup>(57)</sup>
Pin <sup>(55)</sup>	×	×	×	○	×
Pin <sup>(54)</sup>	A	×	×	B	×

× : Not use for diode.

○ : Use for diode.

[DISTINATION SELECT]

	US	Canadian	AEP, UK
A	○	○	×
B	○	×	×

## EXPLODED VIEWS

NOTE:

- The mechanical parts with no reference number in the exploded views are not supplied.
- Items marked "+" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

- -XX and -X mean standardized parts, so they may have some difference from the original one.
- Color Indication of Appearance Parts  
Example :  
KNOB, BALANCE (WHITE)... (RED)

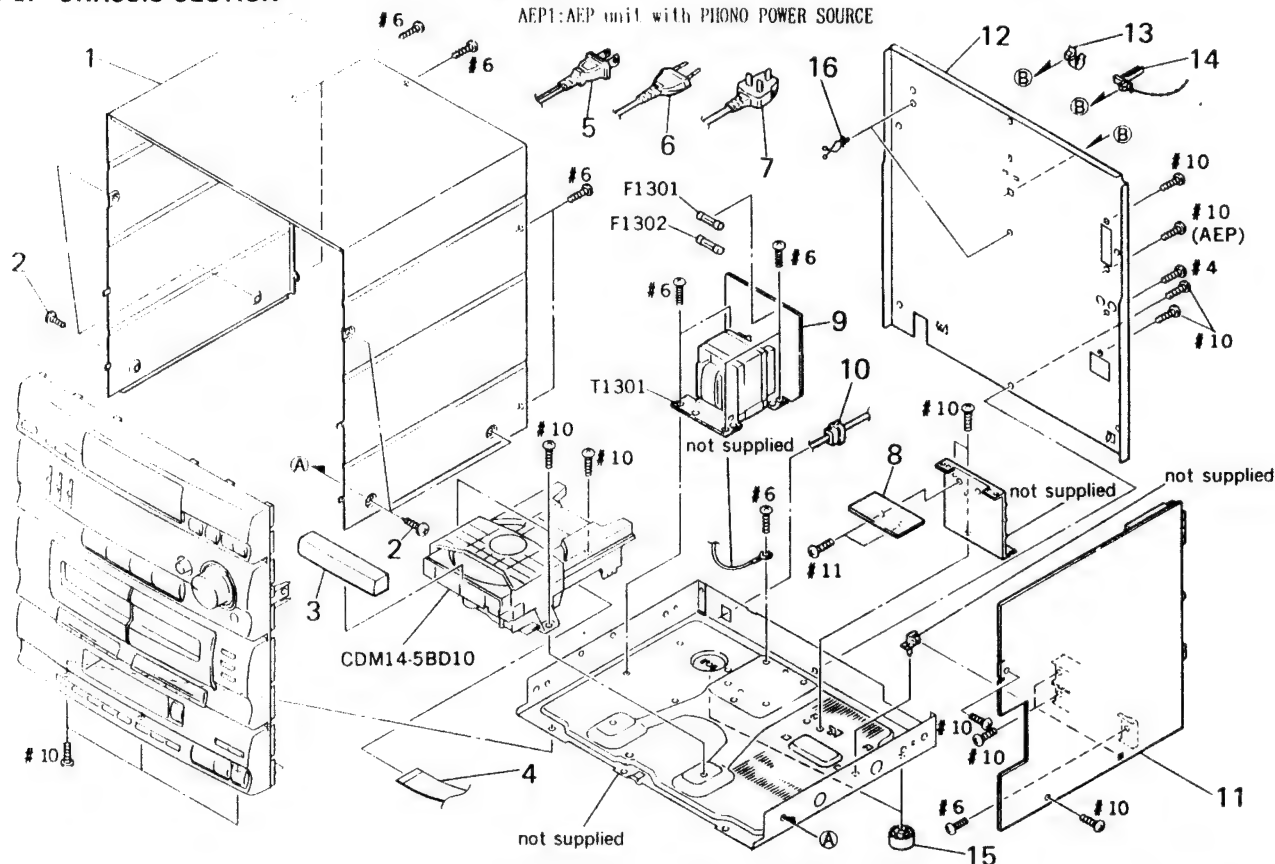
↑                    ↑  
Parts Color   Cabinet's Color

- Hardware (# mark) list and accessories and packing materials are given in the last of this parts list.
- Abbreviation  
AEP1:AEP unit with PHONO POWER SOURCE

The components identified by mark **A** or dotted line with mark. **A** are critical for safety. Replace only with part number specified.

Les composants identifiés par une  
marque  $\Delta$  sont critiques pour  
la sécurité.  
Ne les remplacer que par une pièce  
portant le numéro spécifié.

## 6-1. CHASSIS SECTION

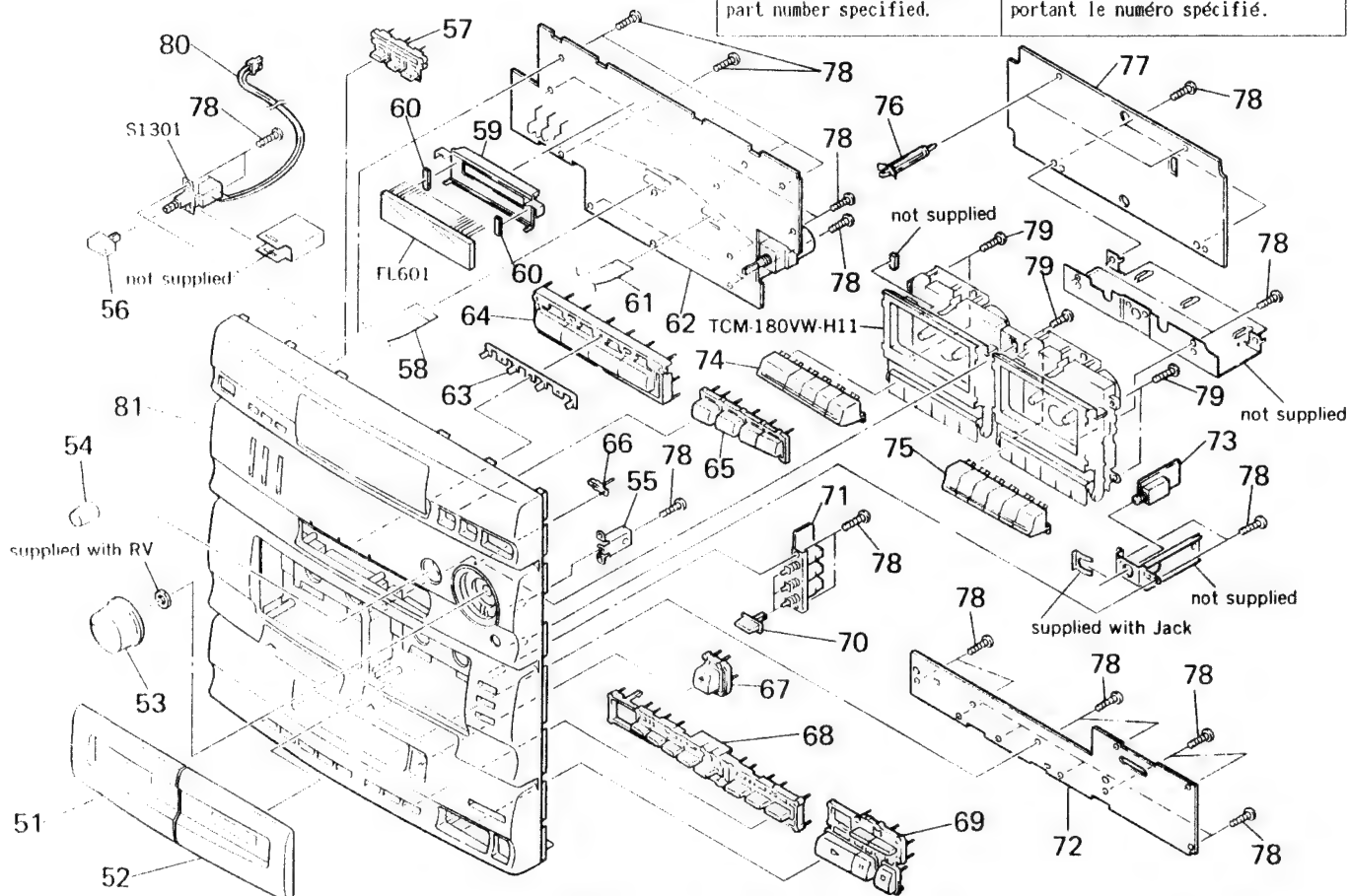


Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
* 1	4 943-170-32	CASE (HCD-G1000)		* 12	4-962-736-01	PANEL, BACK (UK)	
* 1	4 943-170-72	CASE (HCD-A190/D150)		* 12	4-962-736-11	PANEL, BACK (HCD-D150)	
2	3-363-099-01	SCREW (CASE 3 TP2)		* 12	4-962-736-21	PANEL, BACK (Canadian)	
3	4-962-674-01	PANEL, LOADING		* 12	4-962-736-31	PANEL, BACK (HCD-G1000)	
4	1-575-664-31	WIRE, FLAT TYPE (23 CORE)		* 12	4-962-736-41	PANEL, BACK (AEP)	
A5	1-690-609-11	CORD, POWER (US, Canadian)		* 12	4-962-736-61	PANEL, BACK (AEP1)	
A6	1-575-651-11	CORD, POWER (AEP)		* 13	4-949-235-01	HOOK (US, Canadian, AEP)	
A7	1-696-570-21	CORD, POWER (UK)		* 14	4-956-370-02	BAND, PLUG FIXED (UK)	
8	1-650-429-11	POWER AMPLIFIER BOARD		15	X-4941-228-1	FOOT ASSY	
* 9	1-650-598-11	POWER BOARD		* 16	4-953-346-21	CLAMP, LEAD	
* 10	3-703-244-00	RUSHING (2104), CORD		A/F1301	1-532-350-00	FUSE (4A/125V) (AEP, UK)	
* 11	A-4365-784-A	MAIN BOARD, COMPLETE (HCD-G1000)		A/F1301	1-576-108-11	FUSE (4A/125V) (US, Canadian)	
* 11	A-4365-791-A	MAIN BOARD, COMPLETE (UK)		A/F1302	1-532-350-00	FUSE (4A/125V) (AEP, UK)	
* 11	A-4365-803-A	MAIN BOARD, COMPLETE (Canadian, HCD-D150)		A/F1302	1-576-108-11	FUSE (4A/125V) (US, Canadian)	
* 11	A-4369-283-A	MAIN BOARD, COMPLETE (AEP)		A/T1301	1-423-912-11	TRANSFORMER, POWER (US)	
* 11	A-4369-579-A	MAIN BOARD, COMPLETE (AEP1)		A/T1301	1-423-913-11	TRANSFORMER, POWER (AEP, UK)	
				A/T1301	1-423-943-11	TRANSFORMER, POWER (Canadian)	

## 6-2. FRONT PANEL SECTION

The components identified by mark  $\Delta$  or dotted line with mark  $\Delta$  are critical for safety. Replace only with part number specified.

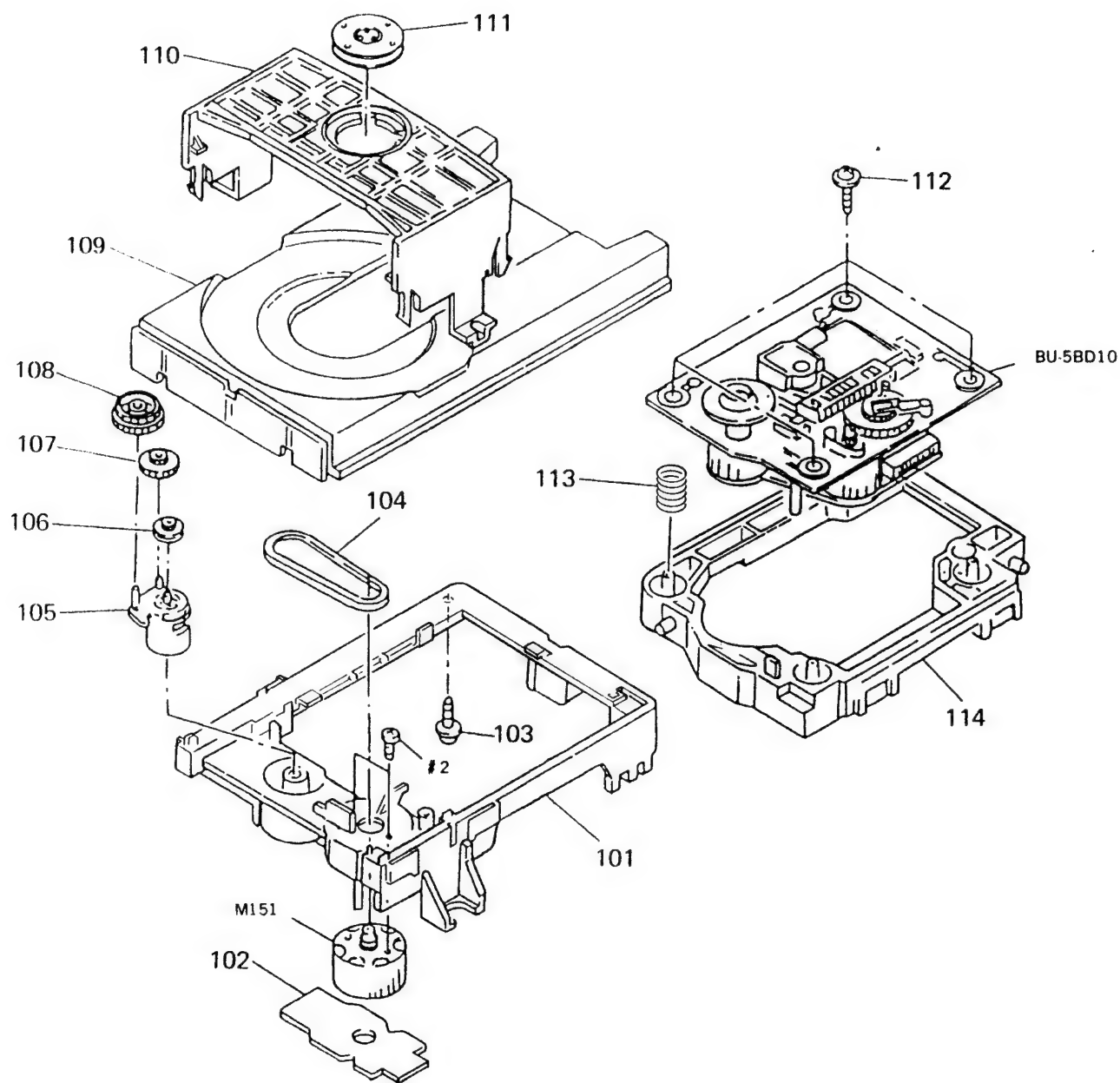
Les composants identifiés par une marque  $\Delta$  sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.



Ref. No.	Part No.	Description	Remark
51	X-4944-276-1	LID (A) ASSY, CASSETTE (HCD-A190/D150)	
51	X-4944-323-1	LID (A) ASSY, CASSETTE (HCD-G1000)	
52	X-4944-277-1	LID (B) ASSY, CASSETTE (HCD-A190/D150)	
52	X-4944-324-1	LID (B) ASSY, CASSETTE (HCD-G1000)	
53	4-955-635-01	KNOB (V)	
54	4-962-703-02	KNOB (SUR)	
55	4-962-712-01	BRACKET (CASE)	
56	4-930-783-31	BUTTON (PO)	
57	4-962-660-01	BUTTON (MEMORY)	
58	1-751-746-11	WIRE (FLAT TYPE) (21 CORE)	
* 59	4-942-301-01	HOLDER, FL TUBE	
* 60	4-949-935-21	CUSHION (FL)	
61	1-590-575-11	WIRE, FLAT TYPE (11 CORE)	
* 62	A-4365-740-A	PANEL BOARD, COMPLETE (Canadian)	
* 62	A-4365-774-A	PANEL BOARD, COMPLETE (HCD-G1000)	
* 62	A-4365-789-A	PANEL BOARD, COMPLETE (AEP, UK)	
* 62	A-4365-799-A	PANEL BOARD, COMPLETE (HCD-D150)	
63	4-962-669-01	INDICATOR (FU)	
64	4-962-662-01	BUTTON (FU) (HCD-A190/D150)	
64	4-962-662-11	BUTTON (FU) (HCD-G1000)	
65	4-962-661-01	BUTTON (BAND)	
66	4-962-682-01	INDICATOR (VO)	
67	4-962-665-01	BUTTON (OPEN)	

Ref. No.	Part No.	Description	Remark
68	4-962-666-01	BUTTON (PROGRAM)	
69	X-4944-275-1	BUTTON (CD) ASSY	
70	4-962-702-01	BUTTON (DDT) (US)	
70	4-964-288-01	BUTTON (DDT-3) (HCD-A190)	
* 71	1-650-427-11	SW BOARD	
* 72	1-650-431-11	CD PANEL BOARD	
* 73	1-650-432-11	H.P. BOARD	
74	4-962-663-01	BUTTON (MD-A)	
75	4-962-664-01	BUTTON (MD-B)	
* 76	4-924-098-81	HOLDER, PC BOARD	
* 77	A-4365-772-A	MAIN TC BOARD, COMPLETE (HCD-G1000)	
* 77	A-4365-787-A	MAIN TC BOARD, COMPLETE (HCD-A190)	
* 77	A-4365-795-A	MAIN TC BOARD, COMPLETE (HCD-D150)	
78	4-951-620-01	SCREW (2.6X8), +BVTP	
79	4-951-620-11	SCREW (2.6X10), +BVTP	
80	1-690-708-11	CORD (WITH CONNECTOR)	
81	X-4944-875-1	PANEL ASSY, FRONT (HCD-G1000)	
81	X-4944-876-1	PANEL ASSY, FRONT (HCD-D150)	
81	X-4944-877-1	PANEL ASSY, FRONT (UK)	
81	X-4944-878-1	PANEL ASSY, FRONT (Canadian, AEP)	
FL601	1-517-258-11	INDICATOR TUBE, FLUORESCENT	
$\Delta$ S1301	1-572-267-61	SWITCH, PUSH (AC POWER) (1 KEY) (POWER)	

6-3. CD MECHANISM SECTION  
(CDM14-5BD10)

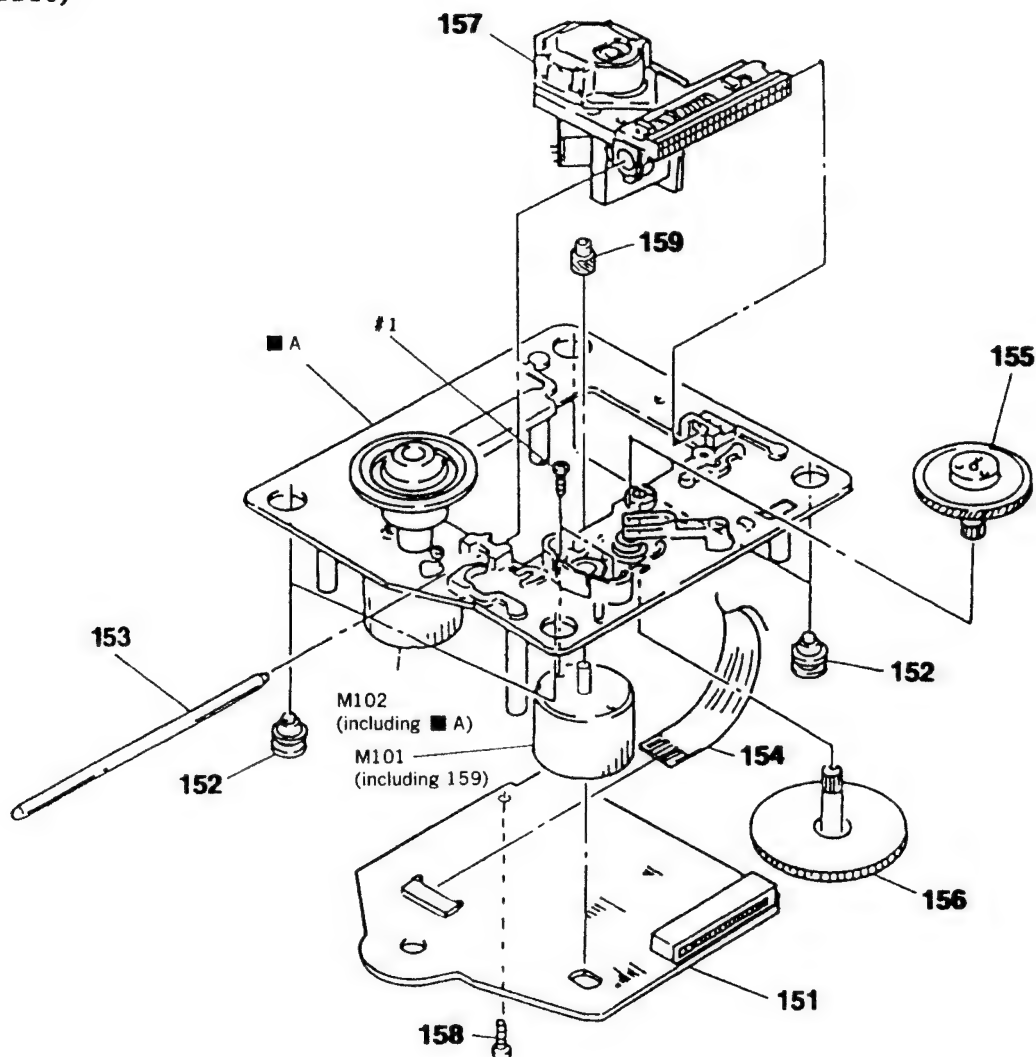


Ref. No.	Part No.	Description	Remark
101	4-933-111-01	CHASSIS (MD)	
* 102	1-645-721-21	LOADING BOARD	
* 103	4-917-583-21	BRACKET, YOKE	
104	4-927-649-01	BELT	
105	4-933-109-01	CAM	
106	4-927-651-01	PULLEY (S)	
107	4-927-628-01	GEAR (C)	
108	4-933-107-01	GEAR (PL)	

Ref. No.	Part No.	Description	Remark
109	4-933-112-01	TABLE, DISC	
110	4-933-110-01	HOLDER (MG)	
* 111	1-452-538-11	MAGNET	
112	4-933-134-01	SCREW (+PTPHW M2.6X6)	
113	4-959-996-01	SPRING (932), COMPRESSION	
114	4-933-129-01	HOLDER (BU)	
M151	A-4604-363-A	MOTOR (L) ASSY	



# 6-4. OPTICAL PICK-UP BLOCK (BU-5BD10)



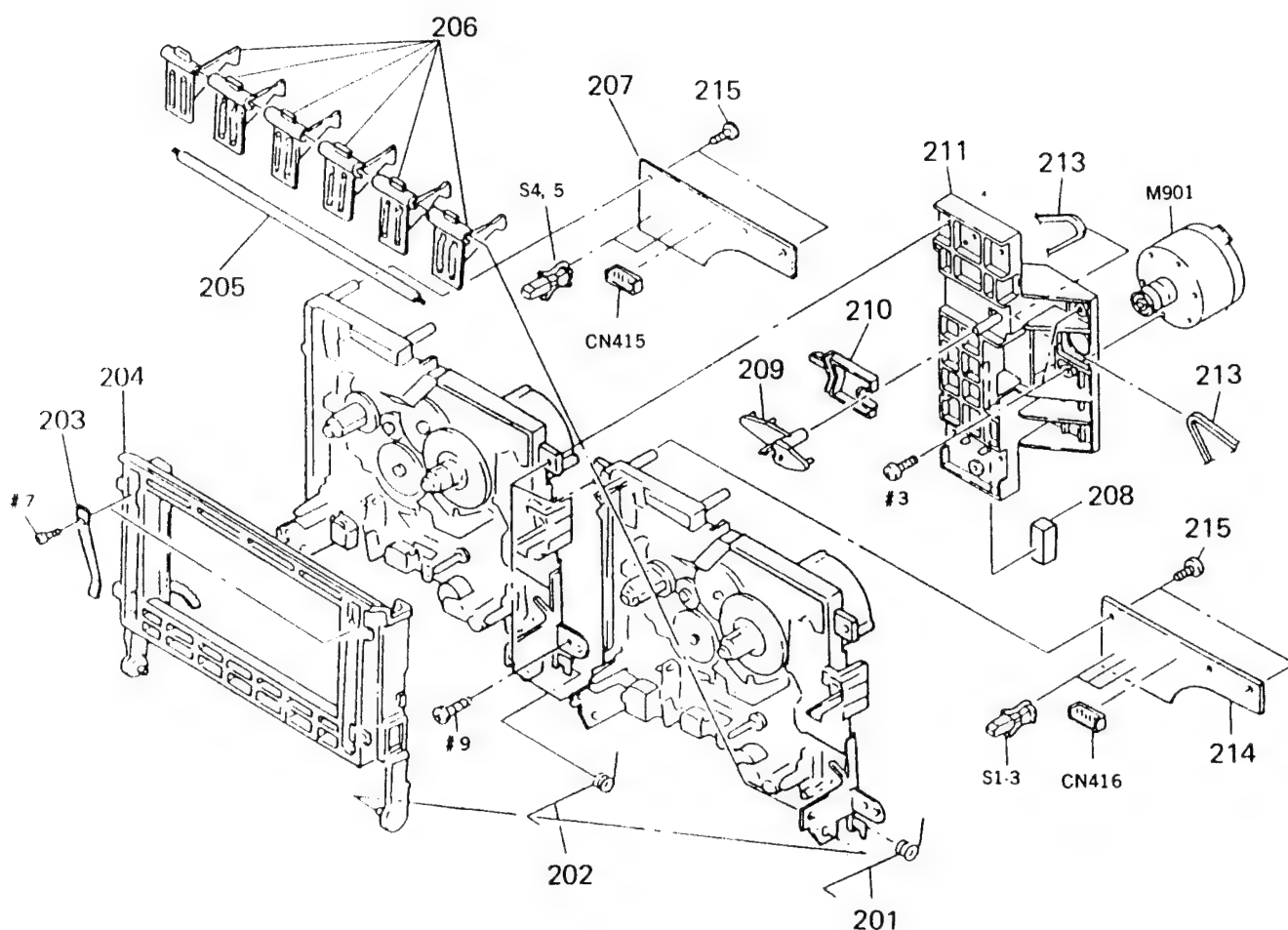
The components identified by mark  $\triangle$  or dotted line with mark  $\triangle$  are critical for safety. Replace only with part number specified.

Les composants identifiés par une marque  $\triangle$  sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

Ref. No.	Part No.	Description	Remark
* 151	A 4649 946 A	BD BOARD, COMPLETE	
152	4-951-940-01	INSULATOR (BU)	
153	4-917-565-01	SHAFT, SLED	
154	1-575-001-11	WIRE, FLAT TYPE (12 CORE)	
155	4-917-567-01	GEAR (M)	
156	4-917-564-01	GEAR (P), FLATNESS	

Ref. No.	Part No.	Description	Remark
$\triangle$ 157	8-848-144-11	DEVICE, OPTICAL KSS-240A	
158	4-951-620-01	SCREW (2.6X8), +BVTP	
159	4-917-566-01	GEAR (S)	
M101	X-4917-504-1	MOTOR ASSY (SLED)	
M102	X-4917-523-3	MOTOR ASSY (SPINDLE)	

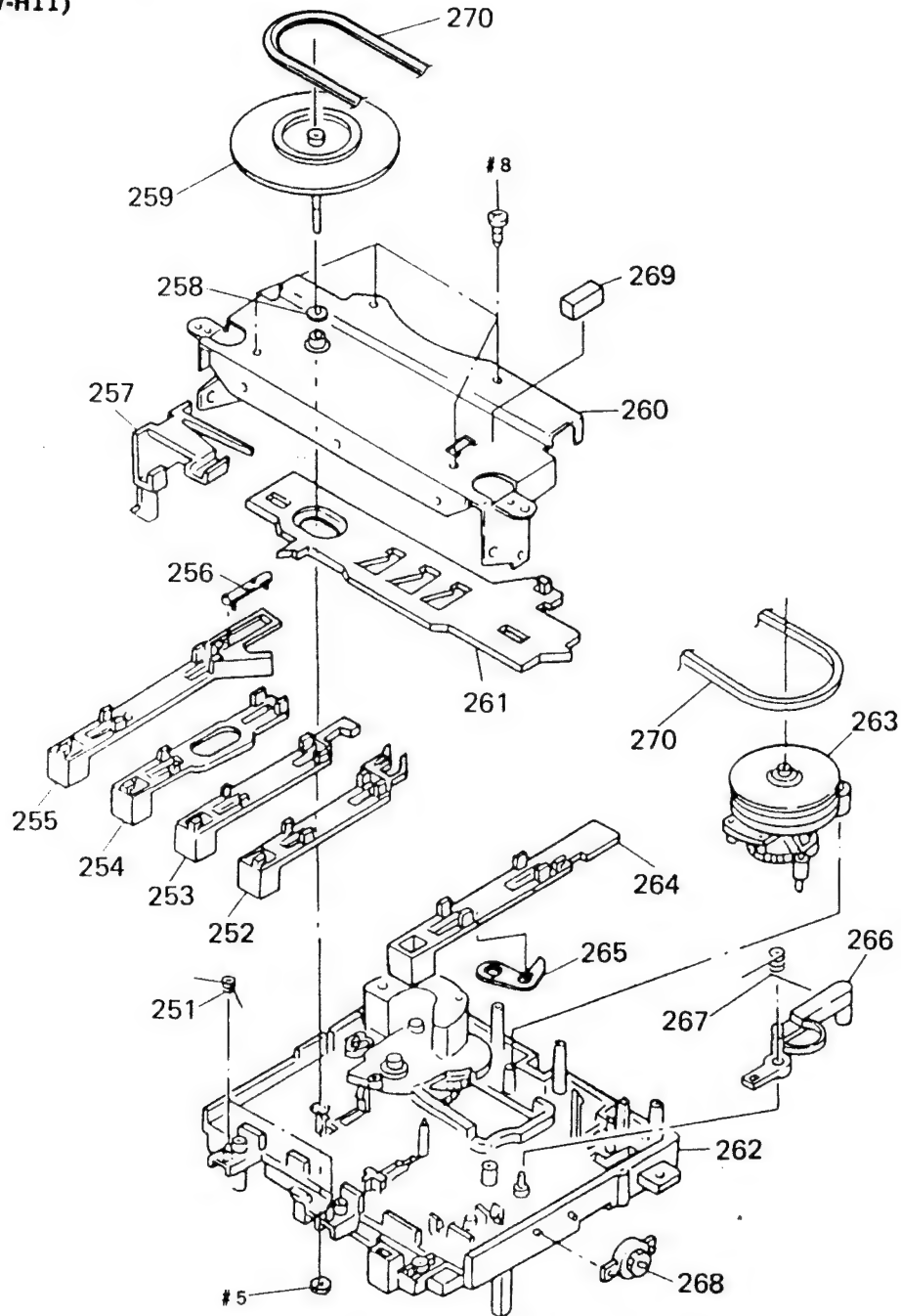
6-5. MECHANISM DECK SECTION 1  
(TCM-180VW-H11)



Ref. No.	Part No.	Description	Remark
201	3-358-287-01	SPRING (LOADING A), TORSION	
202	3-358-229-01	SPRING (LOADING), TORSION	
203	3-358-209-01	SPRING (CASSETTE HOLDER), LEAF	
204	3-358-266-02	HOLDER, CASSETTE	
205	3-371-917-01	SHAFT (BUTTON SHAFT 4)	
206	3-369-335-01	LEVER (BUTTON BASE F)	
* 207	1-640-702-11	LEAF SW (A) BOARD	
* 208	3-358-289-01	SPACER (VIBRATION PROOF MAT)	
209	3-358-203-01	LEVER (TRIGGER)	
210	3-358-202-01	SLIDER (TRIGGER)	
* 211	3-363-930-01	BRACKET (JOINT BASE)	

Ref. No.	Part No.	Description	Remark
213	3-364-777-01	BELT (WH)	
* 214	1-640-703-11	LEAF SW (B) BOARD	
215	4-951-620-01	SCREW (2.6X8), +BVTP	
* CN415	1-568-942-11	PIN, CONNECTOR 4P	
* CN416	1-568-943-11	PIN, CONNECTOR 5P	
M901	X-3362-377-1	MOTOR (WH) ASSY	
S1	1-571-736-11	SWITCH, LEAF (MOTOR)	
S2	1-571-736-11	SWITCH, LEAF (PLAY)	
S3	1-571-736-11	SWITCH, LEAF (REC)	
S4	1-571-736-11	SWITCH, LEAF (MOTOR)	
S5	1-571-736-11	SWITCH, LEAF (PLAY)	

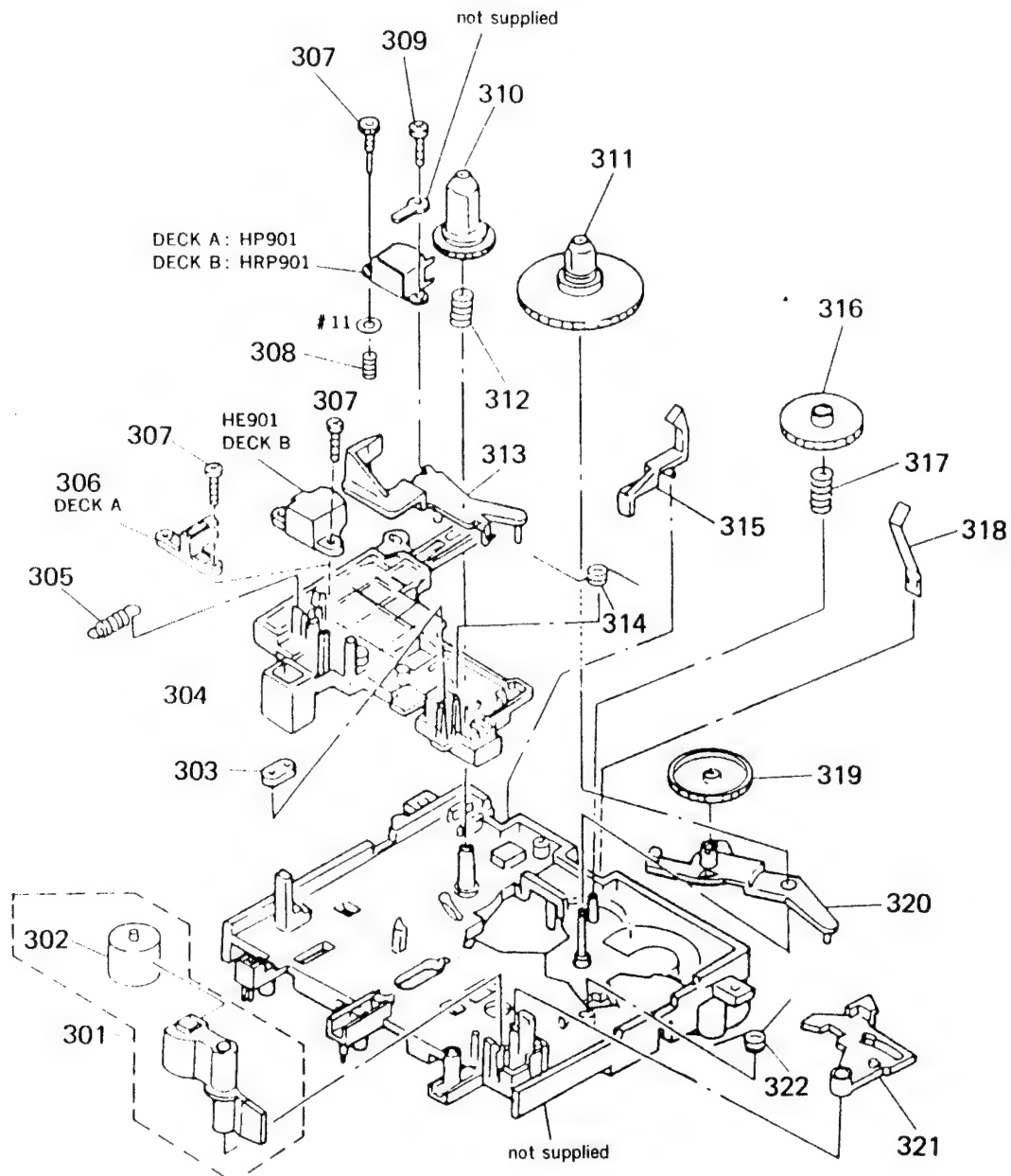
6-6. MECHANISM DECK SECTION 2  
(TCM-180VW-H11)



Ref. No.	Part No.	Description	Remark
251	3-358-232-01	SPRING (S P F-R), TORSION	
252	3-358-258-01	SLIDER (REW)	
253	3-358-257-01	SLIDER (FF)	
254	3-358-256-01	SLIDER (STOP/EJECT)	
255	3-358-260-01	SLIDER (PAUSE)	
* 256	3-358-226-01	LEVER (PAUSE LEVER)	
* 257	3-358-261-02	SLIDER (HOLDER LOCK)	
258	3-701-437-01	WASHER	
259	X-3358-205-1	FLYWHEEL (A) ASSY (DECK B)	
259	X-3366-859-1	FLYWHEEL (D) ASSY (DECK A)	

Ref. No.	Part No.	Description	Remark
* 260	X-3358-208-1	BRACKET (B) ASSY	
* 261	3-358-249-01	SLIDER (LOCK PLATE)	
262	X-3358-207-2	CHASSIS (A) ASSY	
263	X-3358-202-1	LEVER (FR ARM) ASSY	
264	3-358-259-01	SLIDER (REC) (DECK B)	
* 265	3-358-204-01	LEVER (REC SAFETY) (DECK B)	
266	3-358-286-01	LEVER (MOTOR LEVER)	
267	3-358-214-01	SPRING (LOCK), TORSION (DECK A)	
267	3-358-233-01	SPRING (REC-LOCK), TORSION (DECK B)	
268	3-319-224-51	DAMPER, SMALL	
* 269	3-358-289-01	SPACER (VIBRATION PROOF MAT)	
270	3-358-230-01	BELT (A1)	

6-7. MECHANISM DECK SECTION 3  
(TCM-180VW-H11)



Ref. No.	Part No.	Description	Remark
301	X-3358-204-1	LEVER (PINCH LEVER) ASSY	
302	3-578-143-11	PINCH ROLLER	
* 303	3-358-215-01	BUSHING (WIRE KIT RETAINER)	
304	3-358-265-01	SLIDER (HEAD PC BOARD A)	
305	3-358-217-01	SPRING, TENSION	
+ 306	3-363-931-01	GUIDE, TAPE (DECK A)	
307	3-358-288-11	SCREW (T), AZIMUTH	
308	3-358-234-01	SPRING (AZIMUTH), COMPRESSION	
309	3-358-288-01	SCREW (T), AZIMUTH	
310	3-358-248-01	GEAR (SUPPLY REEL)	
311	X-3358-203-1	TABLE (T) ASSY, REEL	
312	3-358-208-01	SPRING (SUPPLY), COMPRESSION	
+ 313	3-358-251-01	LEVER (TENSION DETECTION ARM)	

Ref. No.	Part No.	Description	Remark
314	3-358-228-01	SPRING, TORSION	
* 315	3-358-255-01	LEVER (GB LEVER) (DECK B)	
* 316	3-358-224-01	GEAR (FF GEAR)	
317	3-358-207-01	SPRING (FF GEAR), COMPRESSION	
318	3-358-227-01	SPRING, LEAF	
+ 319	3-358-284-01	GEAR (TU GEAR)	
+ 320	3-358-252-01	LEVER (TU ARM)	
+ 321	3-358-253-01	LEVER (SHUT-OFF LEVER)	
322	3-358-243-01	SPRING (TU-SHUT), TORSION	
HE901	1-543-673-11	HEAD, MAGNETIC (ERASE) (DECK B)	
HP901	1-543-319-11	HEAD, MAGNETIC (REC/PB) (DECK A)	
HRP901	1-543-319-11	HEAD, MAGNETIC (REC/PB) (DECK B)	

# SECTION 7 ELECTRICAL PARTS LIST

BD

## NOTE:

- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- XX and -X mean standardized parts, so they may have some difference from the original one.
- RESISTORS  
All resistors are in ohms.  
METAL: Metal film resistor.  
METAL OXIDE: Metal oxide film resistor.  
E: nonflammable

- Items marked "+" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

## SEMICONDUCTORS

In each case, u:  $\mu$ , for example:

uA...:  $\mu$ A... uPA...:  $\mu$ PA...  
uPB...:  $\mu$ PB... uPC...:  $\mu$ PC... uPD...:  $\mu$ PD...

## CAPACITORS

uF:  $\mu$ F

## COILS

uH:  $\mu$ H

## Abbreviation

AEPI: AEP unit with PHONO POWER SOURCE

The components identified by mark  $\Delta$  or dotted line with mark  $\Delta$  are critical for safety. Replace only with part number specified.

Les composants identifiés par une marque  $\Delta$  sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
	A 4649 946-A	BD BOARD, COMPLETE *****				< RESISTOR >	
		< CAPACITOR >		R101	1-216-077-00	METAL CHIP 15K 5% 1/10W	
C101	1-163-005-11	CERAMIC CHIP 470PF	10% 50V	R102	1-216-097-00	METAL CHIP 100K 5% 1/10W	
C102	1-163-038-00	CERAMIC CHIP 0.1uF	25V	R103	1-216-077-00	METAL CHIP 15K 5% 1/10W	
C103	1-163-005-11	CERAMIC CHIP 470PF	10% 50V	R104	1-216-085-00	METAL CHIP 33K 5% 1/10W	
C105	1-135-155-21	TANTALUM CHIP 4.7uF	10% 16V	R105	1-216-097-00	METAL CHIP 100K 5% 1/10W	
C106	1-164-346-11	CERAMIC CHIP 1uF	16V	R106	1-216-061-00	METAL CHIP 3.3K 5% 1/10W	
C107	1-164-505-11	CERAMIC CHIP 2.2uF	16V	R107	1-216-061-00	METAL CHIP 3.3K 5% 1/10W	
C108	1-163-035-00	CERAMIC CHIP 0.047uF	50V	R108	1-216-073-00	METAL CHIP 10K 5% 1/10W	
C109	1-163-011-11	CERAMIC CHIP 0.0015uF	10% 50V	R109	1-216-121-00	METAL CHIP 1M 5% 1/10W	
C110	1-163-017-00	CERAMIC CHIP 0.0047uF	5% 50V	R110	1-216-025-00	METAL CHIP 100 5% 1/10W	
C111	1-163-251-11	CERAMIC CHIP 100PF	5% 50V	R112	1-216-049-00	METAL CHIP 1K 5% 1/10W	
C112	1-163-038-00	CERAMIC CHIP 0.1uF	25V	R113	1-216-077-00	METAL CHIP 15K 5% 1/10W	
C113	1-163-038-00	CERAMIC CHIP 0.1uF	25V	R114	1-216-077-00	METAL CHIP 15K 5% 1/10W	
C123	1-164-232-11	CERAMIC CHIP 0.01uF	50V	R117	1-216-077-00	METAL CHIP 15K 5% 1/10W	
C124	1-164-005-11	CERAMIC CHIP 0.47uF	25V	R118	1-216-077-00	METAL CHIP 15K 5% 1/10W	
C151	1-163-007-11	CERAMIC CHIP 680PF	10% 50V	R121	1-216-077-00	METAL CHIP 15K 5% 1/10W	
C152	1-163-007-11	CERAMIC CHIP 680PF	10% 50V	R122	1-216-077-00	METAL CHIP 15K 5% 1/10W	
C153	1-163-038-00	CERAMIC CHIP 0.1uF	25V	R123	1-216-073-00	METAL CHIP 10K 5% 1/10W	
C154	1-164-336-11	CERAMIC CHIP 0.33uF	25V	R124	1-216-097-00	METAL CHIP 100K 5% 1/10W	
C155	1-163-007-11	CERAMIC CHIP 680PF	10% 50V	R125	1-216-049-00	METAL CHIP 1K 5% 1/10W	
C156	1-163-007-11	CERAMIC CHIP 680PF	10% 50V	R126	1-216-049-00	METAL CHIP 1K 5% 1/10W	
C157	1-163-033-00	CERAMIC CHIP 0.022uF	50V	R127	1-216-049-00	METAL CHIP 1K 5% 1/10W	
C158	1-163-033-00	CERAMIC CHIP 0.022uF	50V	R131	1-216-037-00	METAL CHIP 330 5% 1/10W	
C159	1-163-023-00	CERAMIC CHIP 0.015uF	5% 50V	R151	1-216-070-00	METAL CHIP 7.5K 5% 1/10W	
C160	1-163-019-00	CERAMIC CHIP 0.0068uF	10% 50V	R152	1-216-070-00	METAL CHIP 7.5K 5% 1/10W	
C161	1-163-038-00	CERAMIC CHIP 0.1uF	25V	R153	1-216-070-00	METAL CHIP 7.5K 5% 1/10W	
		< CONNECTOR >		R154	1-216-070-00	METAL CHIP 7.5K 5% 1/10W	
CN101	1-568-865-11	SOCKET, CONNECTOR 23P		R155	1-216-070-00	METAL CHIP 7.5K 5% 1/10W	
CN102	1-568-795-11	SOCKET, CONNECTOR 12P		R156	1-216-070-00	METAL CHIP 7.5K 5% 1/10W	
		< IC >		R157	1-216-093-00	METAL CHIP 68K 5% 1/10W	
IC101	8-752-351-94	IC CXD25150		R158	1-216-076-00	METAL CHIP 13K 5% 1/10W	
IC102	8-759-071-79	IC BA6297AFP		R159	1-216-085-00	METAL CHIP 33K 5% 1/10W	
				R160	1-216-081-00	METAL CHIP 22K 5% 1/10W	
				R161	1-216-308-00	METAL CHIP 4.7 5% 1/10W	
				R162	1-216-093-00	METAL CHIP 68K 5% 1/10W	
				R163	1-216-093-00	METAL CHIP 68K 5% 1/10W	



BD	CD PANEL	H. P.	LEAF SW (A)	LEAF SW (B)	LOADING
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Ref. No.	Part No.	Description	Remark
< SWITCH >			
S101	1-572-085-11	SWITCH, LEAF (LIMIT)	
*****			
*	1-650-431-11	CD PANEL BOARD	
*****			
< DIODE >			
D201	8-719-046-38	LED SEL5821A-TH8C (II)	
D202	8-719-046-42	LED SEL5421E-TH8C (D>)	
< TRANSISTOR >			
Q201	8-729-900-89	TRANSISTOR DTC144ES	
Q202	8-729-900-89	TRANSISTOR DTC144ES	
< RESISTOR >			
R201	1-249-411-11	CARBON 330 5% 1/4W	
R202	1-249-409-11	CARBON 220 5% 1/4W	
R203	1-249-417-11	CARBON 1K 5% 1/4W	
R204	1-249-418-11	CARBON 1.2K 5% 1/4W	
R205	1-249-418-11	CARBON 1.2K 5% 1/4W	
R206	1-249-417-11	CARBON 1K 5% 1/4W	
R207	1-249-418-11	CARBON 1.2K 5% 1/4W	
R208	1-249-418-11	CARBON 1.2K 5% 1/4W	
R209	1-249-419-11	CARBON 1.5K 5% 1/4W	
R210	1-249-417-11	CARBON 1K 5% 1/4W	
R211	1-249-418-11	CARBON 1.2K 5% 1/4W	
R212	1-249-418-11	CARBON 1.2K 5% 1/4W	
R213	1-249-419-11	CARBON 1.5K 5% 1/4W	
< SWITCH >			
S201	1-554-303-21	SWITCH, TACTILE (■)	
S202	1-554-303-21	SWITCH, TACTILE (▷)	
S203	1-554-303-21	SWITCH, TACTILE (II)	
S204	1-554-303-21	SWITCH, TACTILE (▶▶ ▶▶ (AMS))	
S205	1-554-303-21	SWITCH, TACTILE (△ OPEN/CLOSE)	
S206	1-554-303-21	SWITCH, TACTILE (◀◀ ◀◀ (AMS))	
S207	1-554-303-21	SWITCH, TACTILE (PROGRAM (PLAY MODE))	
S208	1-554-303-21	SWITCH, TACTILE (REPEAT)	
S209	1-554-303-21	SWITCH, TACTILE (EDIT)	
S210	1-554-303-21	SWITCH, TACTILE (CONTINUE)	
S211	1-554-303-21	SWITCH, TACTILE (SHUFFLE (PLAY MODE))	
S212	1-554-303-21	SWITCH, TACTILE (TIME)	
S213	1-554-303-21	SWITCH, TACTILE (CLEAR)	
S214	1-554-303-21	SWITCH, TACTILE (CHECK)	
*****			

Ref. No.	Part No.	Description	Remark
*	1-650-432-11	H. P. BOARD	
*****			
< JACK >			
CNJ12011-569-113-11		JACK, LARGE TYPE (HEADPHONES)	
*****			
*	1-640-702-11	LEAF SW (A) BOARD	
*****			
< CAPACITOR >			
C544	1-164-159-11	CERAMIC 0.1uF 50V	
< CONNECTOR >			
* CN415	1-568-942-11	PIN, CONNECTOR 4P	
< SWITCH >			
S4	1-571-736-11	SWITCH, LEAF (MOTOR)	
S5	1-571-736-11	SWITCH, LEAF (PLAY)	
*****			
*	1-640-703-11	LEAF SW (B) BOARD	
*****			
< CAPACITOR >			
C545	1-164-159-11	CERAMIC 0.1uF 50V	
< CONNECTOR >			
* CN416	1-568-943-11	PIN, CONNECTOR 5P	
< SWITCH >			
S1	1-571-736-11	SWITCH, LEAF (MOTOR)	
S2	1-571-736-11	SWITCH, LEAF (PLAY)	
S3	1-571-736-11	SWITCH, LEAF (REC)	
*****			
*	1-645-721-21	LOADING BOARD	
*****			
< CONNECTOR >			
* CN151	1-568-943-11	PIN, CONNECTOR 5P	
< SWITCH >			
S151	1-572-086-11	SWITCH, LEAF (LOAD OUT)	
S152	1-572-086-11	SWITCH, LEAF (LOAD IN)	
*****			

# MAIN

Ref. No.	Part No.	Description	Remark
C318	1 124 907 11	ELECT	10uF 20% 50V
C319	1 164-159-11	CERAMIC	0. 1uF 50V
C320	1 137-370-11	FILM	0. 01uF 5% 50V
C321	1 137-370-11	FILM	0. 01uF 5% 50V
C322	1 137-434-11	FILM	0. 0018uF 5% 50V
C323	1 137-434-11	FILM	0. 0018uF 5% 50V
C324	1 164 159 11	CERAMIC	0. 1uF 50V
C325	1 164 159 11	CERAMIC	0. 1uF 50V
C326	1-137-371-11	FILM	0. 015uF 5% 50V
C327	1 137 371-11	FILM	0. 015uF 5% 50V
C328	1 124 907-11	ELECT	10uF 20% 50V
C329	1 124 907 11	ELECT	10uF 20% 50V
C330	1 137 364-11	FILM	0. 001uF 5% 50V
C331	1 137 364 11	FILM	0. 001uF 5% 50V
C332	1 124 477 11	ELECT	47uF 20% 25V
C333	1 124 477 11	ELECT	47uF 20% 25V
C334	1 164 159 11	CERAMIC	0. 1uF 50V
C335	1 164 159 11	CERAMIC	0. 1uF 50V
C336	1 124 443 00	ELECT	100uF 20% 10V
C337	1 164 159 11	CERAMIC	0. 1uF 50V
C338	1 164 027 11	CERAMIC	22PF 5% 50V
C339	1 164-056-11	CERAMIC	27PF 5% 50V
C340	1-124-666-11	ELECT	10uF 20% 50V
C341	1 164 159 11	CERAMIC	0. 1uF 50V
C342	1 164 159 11	CERAMIC	0. 1uF 50V
C1001	1 124 257 00	ELECT	2. 2uF 20% 50V
C1002	1 162-282-31	CERAMIC (HCD-A190/D150)	100PF 10% 50V
C1003	1 162 282 31	CERAMIC (HCD-A190/D150)	100PF 10% 50V
C1004	1 124 477 11	ELECT (HCD-A190/D150)	47uF 20% 25V
C1005	1 161-377-00	CERAMIC (HCD-A190/D150)	0. 0047uF 20% 16V
C1006	1 161 374 11	CERAMIC (HCD-A190/D150)	0. 0015uF 20% 50V
C1007	1 124 464-11	ELECT (HCD-A190/D150)	0. 22uF 20% 50V
C1010	1-124-477-11	ELECT	47uF 20% 25V
C1026	1 162 286-31	CERAMIC	220PF 10% 50V
C1051	1 124-257-00	ELECT	2. 2uF 20% 50V
C1052	1 162-282-31	CERAMIC (HCD-A190/D150)	100PF 10% 50V
C1053	1 162-282-31	CERAMIC (HCD-A190/D150)	100PF 10% 50V
C1054	1-124-477-11	ELECT (HCD-A190/D150)	47uF 20% 25V
C1055	1 161 377 00	CERAMIC (HCD-A190/D150)	0. 0047uF 20% 16V
C1056	1 161 374 11	CERAMIC (HCD-A190/D150)	0. 0015uF 20% 50V

Ref. No.	Part No.	Description	Remark
C1057	1-124-464-11	ELECT (HCD-A190/D150)	0. 22uF 20% 50V
C1060	1-124-477-11	ELECT	47uF 20% 25V
C1076	1-162-286-31	CERAMIC	220PF 10% 50V
C1215	1-162-282-31	CERAMIC	100PF 10% 50V
C1216	1-162-195-31	CERAMIC	4. 7PF 10% 50V
C1217	1-161-379-00	CERAMIC	0. 01uF 20% 25V
C1218	1-124-472-11	ELECT	470uF 20% 10V
C1232	1-124-916-11	ELECT	22uF 20% 63V
C1234	1-161-379-00	CERAMIC	0. 01uF 20% 25V
C1265	1 162-282-31	CERAMIC	100PF 10% 50V
C1266	1 162-195-31	CERAMIC	4. 7PF 10% 50V
C1267	1-161-379-00	CERAMIC	0. 01uF 20% 25V
C1268	1-124-119-00	ELECT	330uF 20% 16V
C1306	1-124-477-11	ELECT	47uF 20% 25V
C1308	1-126-101-11	ELECT	100uF 20% 16V
C1309	1-126-101-11	ELECT	100uF 20% 16V
C1312	1-124-563-11	ELECT	2200uF 20% 25V
C1313	1-126-946-11	ELECT	6800uF 20% 25V
C1314	1 124 122 11	ELECT	100uF 20% 50V
C1315	1-124-927-11	ELECT	4. 7uF 20% 100V
C1316	1-124-910-11	ELECT	47uF 20% 50V
C1319	1-124-463-00	ELECT	0. 1uF 20% 50V
C1320	1-124-907-11	ELECT	10uF 20% 50V
C1321	1-161-379-00	CERAMIC	0. 01uF 20% 25V
C1322	1-161-379-00	CERAMIC	0. 01uF 20% 25V
C1324	1-124-907-11	ELECT	10uF 20% 50V
C1326	1-124-907-11	ELECT	10uF 20% 50V
C1330	1-126-101-11	ELECT	100uF 20% 16V
C1331	1-102-394-11	CERAMIC	0. 01uF 250V
C1335	1-124-907-11	ELECT (AEP1, UK)	10uF 20% 50V
C1336	1-126-101-11	ELECT (AEP1, UK)	10uF 20% 16V
C1340	1-124-480-11	ELECT	470uF 20% 25V
C1341	1-124-907-11	ELECT	10uF 20% 50V
C1351	1-124-910-11	ELECT	47uF 20% 50V
C1352	1-126-105-11	ELECT	1000uF 20% 35V
C1361	1-124-910-11	ELECT	47uF 20% 50V

< FILTER >

CF1	1-567-389-11	FILTER, CERAMIC
CF2	1-567-389-11	FILTER, CERAMIC
CF4	1-527-981-00	FILTER, CERAMIC
CF5	1-577-075-11	OSCILLATOR, CERAMIC
CF6	1-760-220-11	FILTER, CERAMIC

< CONNECTOR >

* CN1	1-568-830-11	SOCKET, CONNECTOR 11P
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Ref. No.	Part No.	Description	Remark			
*	A 4365-784-A	MAIN BOARD, COMPLETE (HCD-G1000)				
*	A 4365-791-A	MAIN BOARD, COMPLETE (UK)				
*	A 4365-803-A	MAIN BOARD, COMPLETE (Canadian, HCD-D150)				
*	A 4369-283-A	MAIN BOARD, COMPLETE (AEP)				
*	A 4369-579-A	MAIN BOARD, COMPLETE (AEP1)				
		*****				
*	4 942-204-01	PLATE, GROUND				
	7 685-646-79	SCREW BVTP 3X8 TYPE2 N-S				
		CAPACITOR :				
C1	1 161-379-00	CERAMIC	0.01uF	20%	25V	
C2	1-124-477-11	ELECT	47uF	20%	25V	
C3	1-161-379-00	CERAMIC	0.01uF	20%	25V	
C4	1 161-379-00	CERAMIC	0.01uF	20%	25V	
C5	1 164-159-11	CERAMIC	0.1uF		50V	
C6	1 161-379-00	CERAMIC	0.01uF	20%	25V	
C7	1-124-477-11	ELECT	47uF	20%	25V	
C8	1-161-379-00	CERAMIC	0.01uF	20%	25V	
C9	1-161-379-00	CERAMIC	0.01uF	20%	25V	
C10	1 161-379-00	CERAMIC	0.01uF	20%	25V	
C11	1 124-907-11	ELECT	10uF	20%	50V	
C12	1 124-902-00	ELECT	0.47uF	20%	50V	
C13	1-124-903-11	ELECT	1uF	20%	50V	
C14	1 124-903-11	ELECT	1uF	20%	50V	
C15	1-124-907-11	ELECT	10uF	20%	50V	
C16	1 124-907-11	ELECT	10uF	20%	50V	
C17	1-124-907-11	ELECT	10uF	20%	50V	
C18	1-124-907-11	ELECT	10uF	20%	50V	
C19	1-136-160-00	FILM	0.039uF	5%	50V	
		(US, Canadian)				
C19	1-136-158-00	FILM	0.027uF	5%	50V	
		(AEP, UK)				
C20	1 136-160-00	FILM	0.039uF	5%	50V	
		(US, Canadian)				
C20	1-136-158-00	FILM	0.027uF	5%	50V	
		(AEP, UK)				
C21	1 161-046-00	CERAMIC	0.0039uF	10%	25V	
		(HCD-A190)				
C22	1 161-046-00	CERAMIC	0.0039uF	10%	25V	
		(HCD-A190)				
C23	1 124-903-11	ELECT	1uF	20%	50V	
C24	1-162-294-31	CERAMIC	0.001uF	10%	50V	
C25	1-161-327-00	CERAMIC	0.0033uF	30%	16V	
C26	1-124-477-11	ELECT	47uF	20%	25V	
C27	1-123-382-00	ELECT	3.3uF	20%	100V	
C28	1-161-494-00	CERAMIC	0.022uF		25V	
C29	1 124-907-11	ELECT	10uF	20%	50V	
C30	1 161-494-00	CERAMIC	0.022uF		25V	
C31	1 101-005-00	CERAMIC	22000PF		50V	

Ref. No.	Part No.	Description	Remark			
C32	1-162-198-31	CERAMIC (US, Canadian)	8.2PF	10%	50V	
C32	1-162-196-31	CERAMIC (AEP, UK)	5.6PF	10%	50V	
C33	1-161-379-00	CERAMIC	0.01uF	20%	25V	
C34	1-161-159-11	CERAMIC (AEP, UK)	0.1uF		50V	
C37	1-161-374-11	CERAMIC (AEP, UK)	0.0015uF	20%	50V	
C38	1-102-120-00	CERAMIC (AEP, UK)	0.0018uF	10%	50V	
C39	1-101-005-00	CERAMIC (AEP, UK)	22000PF		50V	
C45	1-161-379-00	CERAMIC	0.01uF	20%	25V	
C51	1-102-961-00	CERAMIC	27PF	5%	50V	
C52	1-102-961-00	CERAMIC	27PF	5%	50V	
C53	1-124-477-11	ELECT	47uF	20%	25V	
C54	1-161-379-00	CERAMIC	0.01uF	20%	25V	
C55	1-161-379-00	CERAMIC	0.01uF	20%	25V	
C56	1-161-379-00	CERAMIC	0.01uF	20%	25V	
C57	1-161-379-00	CERAMIC	0.01uF	20%	25V	
C58	1-161-379-00	CERAMIC	0.01uF	20%	25V	
C61	1-124-925-11	ELECT	2.2uF	20%	100V	
C62	1-124-463-00	ELECT	0.1uF	20%	50V	
C63	1-161-379-00	CERAMIC	0.01uF	20%	25V	
C64	1-161-379-00	CERAMIC	0.01uF	20%	25V	
C65	1-124-477-11	ELECT	47uF	20%	25V	
C67	1-161-379-00	CERAMIC	0.01uF	20%	25V	
C71	1-136-173-00	FILM (AEP, UK)	0.47uF	5%	50V	
C72	1-161-494-00	CERAMIC (AEP, UK)	0.022uF		25V	
C73	1-124-463-00	ELECT (AEP, UK)	0.1uF	20%	50V	
C301	1-124-477-11	ELECT	47uF	20%	25V	
C303	1-124-927-11	ELECT	4.7uF	20%	100V	
C304	1-126-176-11	ELECT	220uF	20%	10V	
C305	1-124-472-11	ELECT	470uF	20%	10V	
C306	1-124-902-00	ELECT	0.47uF	20%	50V	
C307	1-164-159-11	CERAMIC	0.1uF		50V	
C308	1-124-472-11	ELECT	470uF	20%	10V	
C309	1-124-443-00	ELECT	100uF	20%	10V	
C310	1-164-159-11	CERAMIC	0.1uF		50V	
C311	1-164-159-11	CERAMIC	0.1uF		50V	
C312	1-162-290-31	CERAMIC	470PF	10%	50V	
C313	1-161-379-00	CERAMIC	0.01uF	20%	25V	
C314	1-161-494-00	CERAMIC	0.022uF		25V	
C315	1-164-159-11	CERAMIC	0.1uF		50V	
C316	1-161-494-00	CERAMIC	0.022uF		25V	
C317	1 164-159-11	CERAMIC	0.1uF		50V	

Ref. No.	Part No.	Description	Remark
* CN301	1 568-934-11	PIN, CONNECTOR 7P	
* CN302	1 568-839-11	SOCKET, CONNECTOR 23P	
* CN303	1 568-954-11	PIN, CONNECTOR 5P	
* CN1201	1 537-327-11	TERMINAL BOARD	
* CN1202	1 564-506-11	PLUG, CONNECTOR 3P	
CN1203	1 564-506-11	PLUG, CONNECTOR 3P	
CN1204	1 564-510-11	PLUG, CONNECTOR 7P	
* CN1205	1 564-509-11	PLUG, CONNECTOR 6P	
CN1206	1 568 838 11	SOCKET, CONNECTOR 21P	
CN1301	1 564 511 11	PLUG, CONNECTOR 8P	
CN1302	1 566 210 11	PIN, CONNECTOR 3P (PHONO (POWER SOURCE ONLY FOR PS-LX56P)) (AEP1, UK)	
< DIODE >			
D1	8 719-987 63	DIODE 1N4148M	
D301	8 719-987-63	DIODE 1N4148M	
D302	8 719-010-33	DIODE UZ-4.7BSB	
D304	8 719-210-21	DIODE 11EQS04	
D1201	8 719-987 63	DIODE 1N4148M	
D1301	8 719 312-09	DIODE RBA 402	
D1302	8 719-200-82	DIODE 11ES2	
D1303	8 719-200-82	DIODE 11ES2	
D1304	8 719-200-82	DIODE 11ES2	
D1305	8 719-200-82	DIODE 11ES2	
D1306	8 719-001-76	DIODE UZL 12M3	
D1307	8 719-200-82	DIODE 11ES2	
D1308	8 719-002-60	DIODE UZL-33L	
D1309	8 719-014-66	DIODE UZP-5.6B	
D1310	8 719-987-63	DIODE 1N4148M	
D1317	8 719-200-82	DIODE 11ES2	
D1318	8 719-200-82	DIODE 11ES2	
D1319	8 719-200-82	DIODE 11ES2	
D1320	8 719-200-82	DIODE 11ES2	
D1321	8 719-200-82	DIODE 11ES2	
D1322	8 719-200-82	DIODE 11ES2	
D1323	8 719-200-82	DIODE 11ES2	
D1324	8 719-200-82	DIODE 11ES2	
D1325	8 719-200-82	DIODE 11ES2	
D1326	8 719-200-82	DIODE 11ES2	
D1327	8 719-200-82	DIODE 11ES2	
D1328	8 719-200-82	DIODE 11ES2	
D1329	8 719-200-82	DIODE 11ES2	
D1330	8 719-200-82	DIODE 11ES2	
D1385	8 719-200-82	DIODE 11ES2	
< INDUCTOR >			
FR302	1 412-473 21	INDUCTOR 00H	

Ref. No.	Part No.	Description	Remark
< FRONT END >			
FE1	1-465-673-11	FRONT END (2 BAND) (US, Canadian, UK)	
FE1	1-693-090-31	FRONT END (FM) (2 GANG) (AEP)	
FE2	1-239-634-11	ENCAPSULATED COMPONENT, AM. RF (US, Canadian)	
FE2	1-239-261-12	ENCAPSULATED COMPONENT (AEP, UK)	
FE3	1-236-463-11	ENCAPSULATED COMPONENT (AEP, UK)	
< IC >			
IC1	8-759-176-03	IC LA1835	
IC51	8-759-175-87	IC LC7218-ST	
IC301	8-759-247-42	IC BA3962	
IC302	8-759-805-37	IC L78LR05D-MA	
IC303	8-759-248-11	IC TMP87CH46N-4067	
IC304	8-759-822-09	IC LB1641	
IC305	8-759-145-58	IC uPC4558C	
IC306	8-759-145-58	IC uPC4558C	
IC307	8-759-096-75	IC TDA1545P	
IC308	8-759-917-18	IC SN74HCU04AN	
IC1001	8-759-634-51	IC M5218AP (HCD-A190/D150)	
IC1002	8-759-000-48	IC MC14052BCP	
IC1003	8-759-634-51	IC M5218AP	
IC1202	8-759-634-51	IC M5218AP	
IC1303	8 759-605-00	IC M5F78M07L	
IC1304	8-759-604-95	IC M5F79M07L	
IC1305	8-759-820-13	IC L78MR06	
IC1306	8-759-231-58	IC TA7812S (AEP1, UK)	
< IFT >			
IFT1	1-404-713-11	TRANSFORMER, IF	
< JACK >			
* J1001	1-580-691-11	JACK, PIN 2P (PHONO (IN)) (HCD-A190/D150)	
* J1001	1-580-691-11	JACK, PIN 2P (VIDEO (IN)) (HCD-G1000)	
< COIL >			
L1	1-410-688-31	INDUCTOR 1.5mH (US, Canadian)	
L1	1-407-500-00	INDUCTOR 4.7mH (AEP, UK)	
L2	1-410-525-11	INDUCTOR 220uH (AEP, UK)	
L301	1-410-322-11	INDUCTOR 3.3uH	
L302	1-410-517-11	INDUCTOR 47uH	
L303	1-410-517-11	INDUCTOR 47uH	
< FILTER >			
LPF1	1-239-597-11	FILTER, LOW PASS (HCD-A190)	
LPF2	1-239-597-11	FILTER, LOW PASS (HCD-A190)	

Ref. No. Part No. Description Remark

< TRANSISTOR >

Q1	8-729-230-99	TRANSISTOR	2SC2669-OY	
Q3	8-729-119-76	TRANSISTOR	2SA1175-HFE (AEP, UK)	
Q4	8-729-119-76	TRANSISTOR	2SA1175-HFE (AEP, UK)	
Q5	8-729-900-80	TRANSISTOR	DTC114ES (AEP, UK)	
Q6	8-729-900-80	TRANSISTOR	DTC114ES (AEP, UK)	
Q7	8-729-900-80	TRANSISTOR	DTC114ES (AEP, UK)	
Q8	8-729-900-80	TRANSISTOR	DTC114ES (AEP, UK)	
Q55	8-729-900-61	TRANSISTOR	DTA114ES	
Q61	8-729-202-67	TRANSISTOR	2SK246-GR3	
Q62	8-729-201-84	TRANSISTOR	2SC3112-B	
Q71	8-729-202-67	TRANSISTOR	2SK246-GR3 (AEP, UK)	
Q72	8-729-201-84	TRANSISTOR	2SC3112-B (AEP, UK)	
Q301	8-729-119-78	TRANSISTOR	2SC2785-HFE	
Q302	8-729-900-80	TRANSISTOR	DTC114ES	
Q303	8-729-900-61	TRANSISTOR	DTA114ES	
Q304	8-729-900-61	TRANSISTOR	DTA114ES	
Q305	8-729-119-78	TRANSISTOR	2SC2785-HFE	
Q306	8-729-119-78	TRANSISTOR	2SC2785-HFE	
Q1001	8-729-119-78	TRANSISTOR	2SC2785-HFE	
Q1051	8-729-119-78	TRANSISTOR	2SC2785-HFE	
Q1301	8-729-141-83	TRANSISTOR	2SB1094-LK	
Q1302	8-729-209-15	TRANSISTOR	2SD2012	

< RESISTOR >

R1	1-249-411-11	CARBON	330 5% 1/4W	
R2	1-249-411-11	CARBON	330 5% 1/4W	
R3	1-249-409-11	CARBON	220 5% 1/4W	
R4	1-249-402-11	CARBON	56 5% 1/4W	F
R5	1-247-891-00	CARBON	330K 5% 1/4W	
R6	1-249-411-11	CARBON	330 5% 1/4W	
R9	1-247-807-31	CARBON	100 5% 1/4W	F
R10	1-249-437-11	CARBON	47K 5% 1/4W	
R12	1-249-429-11	CARBON	10K 5% 1/4W	
R13	1-249-442-11	CARBON	510 5% 1/4W	
R14	1-249-403-11	CARBON	68 5% 1/4W	F
R16	1-249-429-11	CARBON	10K 5% 1/4W	
R17	1-247-842-11	CARBON	3K 5% 1/4W	
R18	1-249-429-11	CARBON	10K 5% 1/4W	
R19	1-249-441-11	CARBON	100K 5% 1/4W	
R20	1-249-435-11	CARBON	33K 5% 1/4W	
R21	1-249-441-11	CARBON	100K 5% 1/4W	
R22	1-249-437-11	CARBON	47K 5% 1/4W	
R23	1-249-399-11	CARBON	33 5% 1/4W	
R24	1-249-425-11	CARBON	4.7K 5% 1/4W	
		(AEP, UK)		
R25	1-249-429-11	CARBON	10K 5% 1/4W	
		(AEP, UK)		

Ref. No. Part No. Description Remark

R26	1-249-429-11	CARBON	10K 5% 1/4W	
		(AEP, UK)		
R27	1-249-429-11	CARBON	10K 5% 1/4W	
		(AEP, UK)		
R30	1-249-429-11	CARBON	10K 5% 1/4W	
		(AEP, UK)		
R31	1-249-429-11	CARBON	10K 5% 1/4W	
		(AEP, UK)		
R32	1-249-433-11	CARBON	22K 5% 1/4W	
		(AEP, UK)		
R33	1-247-903-00	CARBON	1M 5% 1/4W	
		(AEP, UK)		
R34	1-249-437-11	CARBON	47K 5% 1/4W	
		(AEP, UK)		
R35	1-249-423-11	CARBON	3.3K 5% 1/4W	
R36	1-249-423-11	CARBON	3.3K 5% 1/4W	
R45	1-249-426-11	CARBON	5.6K 5% 1/4W	
R46	1-249-426-11	CARBON	5.6K 5% 1/4W	
R48	1-249-423-11	CARBON	3.3K 5% 1/4W	
R49	1-249-429-11	CARBON	10K 5% 1/4W	
R50	1-249-401-11	CARBON	47 5% 1/4W	F
R51	1-249-417-11	CARBON	1K 5% 1/4W	
R52	1-249-417-11	CARBON	1K 5% 1/4W	
R53	1-249-417-11	CARBON	1K 5% 1/4W	
R54	1-249-417-11	CARBON	1K 5% 1/4W	
R56	1-249-425-11	CARBON	4.7K 5% 1/4W	
R57	1-249-417-11	CARBON	1K 5% 1/4W	
R58	1-249-417-11	CARBON	1K 5% 1/4W	
R60	1-247-807-31	CARBON	100 5% 1/4W	F
R61	1-249-423-11	CARBON	3.3K 5% 1/4W	
R62	1-249-425-11	CARBON	4.7K 5% 1/4W	
R63	1-249-414-11	CARBON	560 5% 1/4W	
R64	1-249-417-11	CARBON	1K 5% 1/4W	
R65	1-249-410-11	CARBON	270 5% 1/4W	
R66	1-249-421-11	CARBON	2.2K 5% 1/4W	
R67	1-249-425-11	CARBON	4.7K 5% 1/4W	
R68	1-249-425-11	CARBON	4.7K 5% 1/4W	
R69	1-247-807-31	CARBON	100 5% 1/4W	
R71	1-249-423-11	CARBON	3.3K 5% 1/4W	
		(AEP, UK)		
R72	1-249-433-11	CARBON	22K 5% 1/4W	
		(AEP, UK)		
R73	1-249-414-11	CARBON	560 5% 1/4W	
		(AEP, UK)		
R74	1-249-417-11	CARBON	1K 5% 1/4W	
		(AEP, UK)		
R75	1-249-410-11	CARBON	270 5% 1/4W	
		(AEP, UK)		
R76	1-249-421-11	CARBON	2.2K 5% 1/4W	
		(AEP, UK)		

The components identified by mark  $\Delta$  or dotted line with mark  $\Delta$  are critical for safety. Replace only with part number specified.

Les composants identifiés par une marque  $\Delta$  sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.



Ref. No.	Part No.	Description			Remark
R77	1-249-425-11	CARBON (AEP, UK)	4.7K	5%	1/4W
R78	1-247-807-31	CARBON (AEP, UK)	100	5%	1/4W
R301	1-249-429-11	CARBON	10K	5%	1/4W
R302	1-249-429-11	CARBON	10K	5%	1/4W
R303	1-249-417-11	CARBON	1K	5%	1/4W
R304	1-249-425-11	CARBON	4.7K	5%	1/4W
R305	1-249-417-11	CARBON	1K	5%	1/4W
R306	1-249-417-11	CARBON	1K	5%	1/4W
R307	1-249-417-11	CARBON	1K	5%	1/4W
R309	1-249-431-11	CARBON	15K	5%	1/4W
R310	1-249-431-11	CARBON	15K	5%	1/4W
R311	1-249-431-11	CARBON	15K	5%	1/4W
R312	1-249-425-11	CARBON	4.7K	5%	1/4W
R313	1-249-425-11	CARBON	4.7K	5%	1/4W
R315	1-249-429-11	CARBON	10K	5%	1/4W
R316	1-249-429-11	CARBON	10K	5%	1/4W
R317	1-249-429-11	CARBON	10K	5%	1/4W
R318	1-249-429-11	CARBON	10K	5%	1/4W
R319	1-249-431-11	CARBON	15K	5%	1/4W
R320	1-249-434-11	CARBON	27K	5%	1/4W
R321	1-249-434-11	CARBON	27K	5%	1/4W
R322	1-249-425-11	CARBON	4.7K	5%	1/4W
R323	1-249-425-11	CARBON	4.7K	5%	1/4W
R324	1-249-411-11	CARBON	330	5%	1/4W
R325	1-249-411-11	CARBON	330	5%	1/4W
R326	1-247-842-11	CARBON	3K	5%	1/4W
R327	1-247-842-11	CARBON	3K	5%	1/4W
R328	1-249-416-11	CARBON	820	5%	1/4W
R329	1-249-416-11	CARBON	820	5%	1/4W
R330	1-249-420-11	CARBON	1.8K	5%	1/4W
R331	1-249-420-11	CARBON	1.8K	5%	1/4W
R332	1-249-424-11	CARBON	3.9K	5%	1/4W
R333	1-249-424-11	CARBON	3.9K	5%	1/4W
R334	1-249-420-11	CARBON	1.8K	5%	1/4W
R335	1-249-420-11	CARBON	1.8K	5%	1/4W
R336	1-247-838-00	CARBON	2K	5%	1/4W
R337	1-247-838-00	CARBON	2K	5%	1/4W
R338	1-249-417-11	CARBON	1K	5%	1/4W
R339	1-249-417-11	CARBON	1K	5%	1/4W
R340	1-249-441-11	CARBON	100K	5%	1/4W
R341	1-249-441-11	CARBON	100K	5%	1/4W
R342	1-247-903-00	CARBON	1M	5%	1/4W
R343	1-247-828-11	CARBON	750	5%	1/4W
R344	1-249-414-11	CARBON	560	5%	1/4W
R1001	1-249-417-11	CARBON	1K	5%	1/4W
R1002	1-249-437-11	CARBON (HCD-A190/D150)	47K	5%	1/4W

Ref. No.	Part No.	Description			Remark
R1003	1-249-416-11	CARBON (HCD-A190/D150)	820	5%	1/4W
R1004	1-247-897-11	CARBON (HCD-A190/D150)	560K	5%	1/4W
R1005	1-249-437-11	CARBON (HCD-A190/D150)	47K	5%	1/4W
R1006	1-249-409-11	CARBON (HCD-A190/D150)	220	5%	1/4W
R1007	1-249-441-11	CARBON	100K	5%	1/4W
R1010	1-249-431-11	CARBON	15K	5%	1/4W
R1016	1-249-437-11	CARBON	47K	5%	1/4W
R1017	1-249-437-11	CARBON	47K	5%	1/4W
R1021	1-249-434-11	CARBON	27K	5%	1/4W
R1023	1-249-434-11	CARBON	27K	5%	1/4W
R1034	1-249-425-11	CARBON	4.7K	5%	1/4W
R1035	1-249-433-11	CARBON	22K	5%	1/4W
R1036	1-249-425-11	CARBON	4.7K	5%	1/4W
R1037	1-249-437-11	CARBON	47K	5%	1/4W
R1051	1-249-417-11	CARBON	1K	5%	1/4W
R1052	1-249-437-11	CARBON (HCD-A190/D150)	47K	5%	1/4W
R1053	1-249-416-11	CARBON (HCD-A190/D150)	820	5%	1/4W
R1054	1-247-897-11	CARBON (HCD-A190/D150)	560K	5%	1/4W
R1055	1-249-437-11	CARBON (HCD-A190/D150)	47K	5%	1/4W
R1056	1-249-409-11	CARBON (HCD-A190/D150)	220	5%	1/4W
R1057	1-249-441-11	CARBON	100K	5%	1/4W
R1060	1-249-431-11	CARBON	15K	5%	1/4W
R1071	1-249-434-11	CARBON	27K	5%	1/4W
R1073	1-249-434-11	CARBON	27K	5%	1/4W
R1210	1-249-437-11	CARBON	47K	5%	1/4W
R1211	1-247-901-11	CARBON	820K	5%	1/4W
R1212	1-249-399-11	CARBON	33	5%	1/4W
R1214	1-249-429-11	CARBON	10K	5%	1/4W
R1260	1-249-437-11	CARBON	47K	5%	1/4W
R1261	1-247-901-11	CARBON	820K	5%	1/4W
R1262	1-249-399-11	CARBON	33	5%	1/4W
R1263	1-247-807-31	CARBON	100	5%	1/4W
R1303	1-249-421-11	CARBON	2.2K	5%	1/4W
R1304	1-249-425-11	CARBON	4.7K	5%	1/4W
R1321	1-249-417-11	CARBON	1K	5%	1/4W
R1322	1-249-429-11	CARBON	10K	5%	1/4W
R1345	1-249-422-11	CARBON	2.7K	5%	1/4W
< VARIABLE RESISTOR >					
RV1	1-238-601-11	RES, ADJ, CARBON 22K			
RV2	1-238-600-11	RES, ADJ, CARBON 10K			

Ref. No.	Part No.	Description	Remark			
TERMINAL						
* IM1	1 537 264 11	TERMINAL BOARD (ANTENNA) (US, Canadian, UK)				
* IM1	1 537 288 11	TERMINAL BOARD, ANTENNA (PAL) (ANTENNA) (AEP)				
VIBRATOR						
X301	1 579-125 11	VIBRATOR, CERAMIC (8MHz)				
X302	1 567-908 11	VIBRATOR, CRYSTAL (16.9MHz)				
XT51	1 577-126 21	VIBRATOR, CRYSTAL (7.2MHz)				
*****						
*	A 4365 772-A	MAIN TC BOARD, COMPLETE (HCD-G1000)				
*	A 4365 787-A	MAIN TC BOARD, COMPLETE (HCD-A190)				
*	A 4365 795-A	MAIN TC BOARD, COMPLETE (HCD-D150)				
*****						
*	4 942 204 01	PLATE, GROUND				
< CAPACITOR >						
C700	1 162-282 31	CERAMIC	100PF	10%	50V	
C701	1 162-290 31	CERAMIC	470PF	10%	50V	
C702	1 137-372 11	FILM	0.022uF	5%	50V	
C703	1 124-907 11	ELECT	10uF	20%	50V	
C704	1 162-292 31	CERAMIC	680PF	10%	50V	
C710	1 162-282 31	CERAMIC	100PF	10%	50V	
C711	1 162-289 31	CERAMIC	390PF	10%	50V	
C712	1 137-372 11	FILM	0.022uF	5%	50V	
C713	1-124-907-11	ELECT	10uF	20%	50V	
C715	1 124-443-00	ELECT	100uF	20%	10V	
C721	1-137-368-11	FILM	0.0047uF	5%	50V	
C722	1 124-903 11	ELECT	1uF	20%	50V	
C723	1 124-927-11	ELECT	4.7uF	20%	100V	
C724	1 137-399-11	FILM	0.1uF	5%	50V	
		(Canadian, AEP, UK)				
C724	1-164-095-11	CERAMIC	0.01uF	10%	16V	
		(US)				
C725	1-124-907-11	ELECT	10uF	20%	50V	
C726	1 124-903-11	ELECT	1uF	20%	50V	
C727	1-124-902-00	ELECT	0.47uF	20%	50V	
C728	1 124-927 11	ELECT	4.7uF	20%	100V	
C729	1 162-291-31	CERAMIC	560PF	10%	50V	
C730	1 161-374 11	CERAMIC	0.0015uF	20%	50V	
C731	1-164-056-11	CERAMIC	27PF	5%	50V	
C732	1-101-890-00	CERAMIC	75PF	5%	50V	
C733	1-162-288-31	CERAMIC	330PF	10%	50V	
C734	1 164 066 11	CERAMIC	68PF	5%	50V	
C800	1 162 282 31	CERAMIC	100PF	10%	50V	
C801	1 162-290-31	CERAMIC	470PF	10%	50V	
C802	1 137-372-11	FILM	0.022uF	5%	50V	

Ref. No.	Part No.	Description	Remark			
C803	1 124-907-11	ELECT	10uF	20%	50V	
C804	1 162-292-31	CERAMIC	680PF	10%	50V	
C810	1-162-282-31	CERAMIC	100PF	10%	50V	
C811	1 162-289-31	CERAMIC	390PF	10%	50V	
C812	1-137-372-11	FILM	0.022uF	5%	50V	
C813	1-124-907-11	ELECT	10uF	20%	50V	
C815	1-124-443-00	ELECT	100uF	20%	10V	
C821	1-137-368-11	FILM	0.0047uF	5%	50V	
C822	1-124-903-11	ELECT	1uF	20%	50V	
C823	1-124-927-11	ELECT	4.7uF	20%	100V	
C824	1-137-399-11	FILM	0.1uF	5%	50V	
	(Canadian, AEP, UK)					
C824	1-164-095-11	CERAMIC	0.01uF	10%	16V	
	(US)					
C825	1-124-907-11	ELECT	10uF	20%	50V	
C826	1 124-903-11	ELECT	1uF	20%	50V	
C827	1-124-902-00	ELECT	0.47uF	20%	50V	
C828	1-124-927-11	ELECT	4.7uF	20%	100V	
C829	1-162-291-31	CERAMIC	560PF	10%	50V	
C830	1-161-374-11	CERAMIC	0.0015uF	20%	50V	
C831	1-164-056-11	CERAMIC	27PF	5%	50V	
C832	1-101-890-00	CERAMIC	75PF	5%	50V	
C833	1-162-288-31	CERAMIC	330PF	10%	50V	
C834	1-164-066-11	CERAMIC	68PF	5%	50V	
C903	1-124-443-00	ELECT	100uF	20%	10V	
C904	1-124-443-00	ELECT	100uF	20%	10V	
C905	1-124-443-00	ELECT	100uF	20%	10V	
C906	1-124-443-00	ELECT	100uF	20%	10V	
C907	1-124-443-00	ELECT	100uF	20%	10V	
C908	1-124-443-00	ELECT	100uF	20%	10V	
C909	1-124-907-11	ELECT	10uF	20%	50V	
C910	1-124-907-11	ELECT	10uF	20%	50V	
C913	1-124-927-11	ELECT	4.7uF	20%	100V	
C915	1-126-933-11	ELECT	100uF	20%	16V	
C920	1-161-379-00	CERAMIC	0.01uF	20%	25V	
C921	1-124-925-11	ELECT	2.2uF	20%	100V	
C922	1-137-460-91	FILM	0.0082uF	5%	100V	
C923	1-124-925-11	ELECT	2.2uF	20%	100V	
C924	1-137-438-11	FILM	0.0082uF	5%	50V	
C925	1-161-329-00	CERAMIC	0.0068uF	30%	16V	
C926	1-137-436-11	FILM	0.0039uF	5%	50V	
C927	1-137-436-11	FILM	0.0039uF	5%	50V	
C928	1-137-399-11	FILM	0.1uF	5%	50V	
C929	1-124-120-11	ELECT	220uF	20%	25V	
C931	1-124-120-11	ELECT	220uF	20%	25V	
C942	1-124-927-11	ELECT	4.7uF	20%	100V	
	(HCD-A190)					
C943	1 124-903-11	ELECT	1uF	20%	50V	
C944	1-124-907-11	ELECT	10uF	20%	50V	

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
C945	1-161-379-00	CERAMIC	0.01uF 20% 25V	Q909	8-729-900-89	TRANSISTOR DTC144ES	
C946	1-124-925-11	ELECT	2.2uF 20% 100V	Q910	8-729-900-65	TRANSISTOR DTA144ES	
< CONNECTOR >				Q911	8-729-900-65	TRANSISTOR DTA144ES (HCD-A190/G1000)	
* CN901	1-564-507-11	PLUG, CONNECTOR 4P		Q912	8-729-900-89	TRANSISTOR DTC144ES (HCD-A190/G1000)	
* CN902	1-564-508-11	PLUG, CONNECTOR 5P		< RESISTOR >			
CN903	1-564-506-11	PLUG, CONNECTOR 3P		R701	1-247-889-00	CARBON 270K 5% 1/4W	
* CN904	1-564-509-11	PLUG, CONNECTOR 6P		R702	1-249-404-00	CARBON 82 5% 1/4W	
CN905	1-564-505-11	PLUG, CONNECTOR 2P		R703	1-247-882-11	CARBON 130K 5% 1/4W	
* CN906	1-564-706-11	PIN, CONNECTOR (SMALL TYPE) 4P		R704	1-247-850-11	CARBON 6.2K 5% 1/4W	
* CN911	1-560-061-00	PIN, CONNECTOR 3P		R711	1-247-889-00	CARBON 270K 5% 1/4W	
* CN912	1-560-060-00	PIN, CONNECTOR 2P (HCD-A190/G1000)		R712	1-249-404-00	CARBON 82 5% 1/4W	
< DIODE >				R713	1-247-882-11	CARBON 130K 5% 1/4W	
D901	8-719-987-63	DIODE 1N4148M		R714	1-247-850-11	CARBON 6.2K 5% 1/4W	
D902	8-719-987-63	DIODE 1N4148M		R715	1-249-433-11	CARBON 22K 5% 1/4W	
D903	8-719-987-63	DIODE 1N4148M		R720	1-249-425-11	CARBON 4.7K 5% 1/4W	
D904	8-719-987-63	DIODE 1N4148M		R721	1-249-429-11	CARBON 10K 5% 1/4W	
D905	8-719-987-63	DIODE 1N4148M		R722	1-249-431-11	CARBON 15K 5% 1/4W	
D906	8-719-987-63	DIODE 1N4148M		R723	1-249-429-11	CARBON 10K 5% 1/4W	
D907	8-719-987-63	DIODE 1N4148M		R724	1-249-421-11	CARBON 2.2K 5% 1/4W	
D908	8-719-987-63	DIODE 1N4148M		R725	1-249-428-11	CARBON 8.2K 5% 1/4W	
D909	8-719-987-63	DIODE 1N4148M		R726	1-247-840-00	CARBON 2.4K 5% 1/4W	
< IC >				R727	1-249-433-11	CARBON 22K 5% 1/4W	
IC903	8-759-098-73	IC HA12172NT (Canadian, AEP, UK)		R728	1-249-417-11	CARBON 1K 5% 1/4W	
IC903	8-759-198-48	IC HA12184NT (US)		R731	1-249-430-11	CARBON 12K 5% 1/4W	
IC904	8-759-111-44	IC uPC4570C-1		R801	1-247-889-00	CARBON 270K 5% 1/4W	
IC905	8-759-111-44	IC uPC4570C-1		R802	1-249-404-00	CARBON 82 5% 1/4W	
IC906	8-759-143-54	IC uPC1330HA		R803	1-247-882-11	CARBON 130K 5% 1/4W	
IC907	8-759-240-81	IC TC4081BP		R804	1-247-850-11	CARBON 6.2K 5% 1/4W	
< COIL >				R811	1-247-889-00	CARBON 270K 5% 1/4W	
L701	1-410-780-11	INDUCTOR 27mH		R812	1-249-404-00	CARBON 82 5% 1/4W	
L801	1-410-780-11	INDUCTOR 27mH		R813	1-247-882-11	CARBON 130K 5% 1/4W	
L901	1-414-223-11	INDUCTOR 470uH		R814	1-247-850-11	CARBON 6.2K 5% 1/4W	
< TRANSISTOR >				R815	1-249-433-11	CARBON 22K 5% 1/4W	
Q701	8-729-119-78	TRANSISTOR 2SC2785-HFE		R820	1-249-425-11	CARBON 4.7K 5% 1/4W	
Q801	8-729-119-78	TRANSISTOR 2SC2785-HFE		R821	1-249-429-11	CARBON 10K 5% 1/4W	
Q901	8-729-194-57	TRANSISTOR 2SC945-P		R822	1-249-431-11	CARBON 15K 5% 1/4W	
Q902	8-729-194-57	TRANSISTOR 2SC945-P		R823	1-249-429-11	CARBON 10K 5% 1/4W	
Q903	8-729-119-76	TRANSISTOR 2SA1175-HFE		R824	1-249-421-11	CARBON 2.2K 5% 1/4W	
Q904	8-729-119-78	TRANSISTOR 2SC2785-HFE		R825	1-249-428-11	CARBON 8.2K 5% 1/4W	
Q905	8-729-119-76	TRANSISTOR 2SA1175-HFE (HCD-A190/G1000)		R826	1-247-840-00	CARBON 2.4K 5% 1/4W	
Q906	8-729-900-89	TRANSISTOR DTC144ES (HCD-A190/G1000)		R827	1-249-433-11	CARBON 22K 5% 1/4W	
Q907	8-729-900-89	TRANSISTOR DTC144ES		R828	1-249-417-11	CARBON 1K 5% 1/4W	
Q908	8-729-900-89	TRANSISTOR DTC144ES (HCD-A190)		R831	1-249-430-11	CARBON 12K 5% 1/4W	
				R902	1-249-389-11	CARBON 4.7 5% 1/4W	
				R903	1-249-413-11	CARBON 470 5% 1/4W	
				R904	1-249-413-11	CARBON 470 5% 1/4W	
				R905	1-249-413-11	CARBON 470 5% 1/4W	
				R906	1-249-413-11	CARBON 470 5% 1/4W	

Ref. No.	Part No.	Description	Remark
R910	1 249 437 11	CARBON 47K 5%	1/4W (US)
R911	1 215 451 00	METAL 18K 1%	1/6W (Canadian, AEP, UK)
R911	1 249 432 11	CARBON 18K 5%	1/4W (US)
R912	1 249 440 11	CARBON 82K 5%	1/4W
R913	1 247 862 11	CARBON 20K 5%	1/4W
R914	1 249 437 11	CARBON 47K 5%	1/4W (HCD-A190/G1000)
R915	1 249 437 11	CARBON 47K 5%	1/4W
R916	1 249 437 11	CARBON 47K 5%	1/4W
R917	1 247 864 11	CARBON 24K 5%	1/4W
R918	1 249 437 11	CARBON 47K 5%	1/4W (HCD-A190)
R919	1 249 433 11	CARBON 22K 5%	1/4W
R920	1 249 429 11	CARBON 10K 5%	1/4W
R921	1 249 424 11	CARBON 3.9K 5%	1/4W
R922	1 249 389 11	CARBON 4.7 5%	1/4W
R923	1 249 434 11	CARBON 27K 5%	1/4W
R924	1 249 434 11	CARBON 27K 5%	1/4W
R925	1 249 429 11	CARBON 10K 5%	1/4W
R926	1 249 389 11	CARBON 4.7 5%	1/4W
R931	1 215 905 11	METAL OXIDE 10 5%	3W F
R932	1 249 426 11	CARBON 5.6K 5%	1/4W (HCD-A190/G1000)
R932	1 249 427 11	CARBON 6.8K 5%	1/4W (HCD-D150)
R933	1 249 442 11	CARBON 510 5%	1/4W (HCD-A190/G1000)
R933	1 249 418 11	CARBON 1.2K 5%	1/4W (HCD-D150)
R934	1 249 441 11	CARBON 100K 5%	1/4W (HCD-A190/G1000)
R935	1 249 441 11	CARBON 100K 5%	1/4W (HCD-A190/G1000)
R936	1 249 429 11	CARBON 10K 5%	1/4W (HCD-A190/G1000)
R941	1 249 436 11	CARBON 39K 5%	1/4W
R942	1 249 433 11	CARBON 22K 5%	1/4W (HCD-A190)
R943	1 249 436 11	CARBON 39K 5%	1/4W
R944	1 249 425 11	CARBON 4.7K 5%	1/4W
R945	1 249 433 11	CARBON 22K 5%	1/4W
R946	1 249 421 11	CARBON 2.2K 5%	1/4W
R947	1 249 421 11	CARBON 2.2K 5%	1/4W
R948	1 249 433 11	CARBON 22K 5%	1/4W
R949	1 249 438 11	CARBON 56K 5%	1/4W
R950	1 249 437 11	CARBON 47K 5%	1/4W
R951	1 249 437 11	CARBON 47K 5%	1/4W
R952	1 249 441 11	CARBON 100K 5%	1/4W
R953	1 249 425 11	CARBON 4.7K 5%	1/4W

Ref. No.	Part No.	Description	Remark
R954	1-249-429-11	CARBON 10K 5%	1/4W (HCD-A190/G1000)
R955	1 249 441-11	CARBON 100K 5%	1/4W
R956	1-249-441-11	CARBON 100K 5%	1/4W
R957	1-249-429-11	CARBON 10K 5%	1/4W (HCD-A190/G1000)
< VARIABLE RESISTOR >			
RV701	1-230-496-11	RES, ADJ, CARBON 10K	
RV702	1 230-496-11	RES, ADJ, CARBON 10K	
RV703	1-230-496-11	RES, ADJ, CARBON 10K	
RV704	1-230-499-11	RES, ADJ, CARBON 100K	
RV801	1-230-496-11	RES, ADJ, CARBON 10K	
RV802	1-230-496-11	RES, ADJ, CARBON 10K	
RV803	1-230-496-11	RES, ADJ, CARBON 10K	
RV804	1-230-499-11	RES, ADJ, CARBON 100K	
RV901	1-230-495-11	RES, ADJ, CARBON 2.2K	(HCD-A190/G1000)
RV902	1-230-495-11	RES, ADJ, CARBON 2.2K	
< TRANSFORMER >			
T901	1-433-349-11	TRANSFORMER, BIAS OSCILLATION	
*****			
+ A-4365-740-A PANEL BOARD, COMPLETE (Canadian)			
+ A-4365-774-A PANEL BOARD, COMPLETE (HCD-G1000)			
+ A-4365-789-A PANEL BOARD, COMPLETE (AEP, UK)			
+ A-4365-799-A PANEL BOARD, COMPLETE (HCD-D150)			
*****			
+ 4-942-301-01 HOLDER, FL TUBE			
+ 4-949-935-21 CUSHION (FL)			
< CAPACITOR >			
C601	1-164-159-11	CERAMIC 0.1uF	50V
C602	1-124-261-00	ELECT 10uF	20% 50V
C603	1-104-905-11	CAP, DOUBLE LAYERS	0.22F
C604	1-164-159-11	CERAMIC 0.1uF	50V
C605	1-136-169-00	FILM 0.22uF	5% 50V
C607	1-161-379-00	CERAMIC 0.01uF	20% 25V
C608	1-161-379-00	CERAMIC 0.01uF	20% 25V
C609	1-124-910-11	ELECT 47uF	20% 50V
C610	1-161-379-00	CERAMIC 0.01uF	20% 25V
C1103	1-162-282-31	CERAMIC 100PF	10% 50V
C1104	1-124-234-00	ELECT 22uF	20% 16V
C1107	1-137-371-11	FILM 0.015uF	5% 50V
C1109	1-137-437-11	FILM 0.0056uF	5% 50V
C1111	1-137-437-11	FILM 0.0056uF	5% 50V
C1113	1-161-375-00	CERAMIC 0.0022uF	20% 50V
C1115	1-124-257-00	ELECT 2.2uF	20% 50V
C1120	1-161-379-00	CERAMIC 0.01uF	20% 25V
C1123	1-162-286-31	CERAMIC 220PF	10% 50V

The components identified by mark  $\Delta$  or dotted line with mark  $\Delta$  are critical for safety. Replace only with part number specified.

Les composants identifiés par une marque  $\Delta$  sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

Ref. No.	Part No.	Description	Remark			
C1143	1-126-176-11	ELECT	220uF	20%	10V	
C1153	1-162-282-31	CERAMIC	100PF	10%	50V	
C1154	1-124-234-00	ELECT	22uF	20%	16V	
C1157	1-137-371-11	FILM	0.015uF	5%	50V	
C1159	1-137-437-11	FILM	0.0056uF	5%	50V	
C1161	1-137-437-11	FILM	0.0056uF	5%	50V	
C1163	1-161-375-00	CERAMIC	0.0022uF	20%	50V	
C1165	1-124-257-00	ELECT	2.2uF	20%	50V	
C1173	1-162-286-31	CERAMIC	220PF	10%	50V	
C1197	1-161-379-00	CERAMIC	0.01uF	20%	25V	

< CONNECTOR >

* CN601	1-568-830-11	SOCKET, CONNECTOR 11P
CN1101	1-568-838-11	SOCKET, CONNECTOR 21P

< COMPOSITION CIRCUIT BLOCK >

CP601	1-239-505-11	COMPOSITION CIRCUIT BLOCK
* CP602	1-233-216-11	COMPOSITION CIRCUIT BLOCK

< DIODE >

D601	8-719-987-63	DIODE	1N4148M	
D602	8-719-987-63	DIODE	1N4148M	
D603	8-719-987-63	DIODE	1N4148M	
D604	8-719-200-82	DIODE	11ES2	
D622	8-719-987-63	DIODE	1N4148M (US, Canadian)	
D627	8-719-987-63	DIODE	1N4148M	
D628	8-719-987-63	DIODE	1N4148M (US)	
D1131	8-719-038-63	LED	SEL5220S-TH8C (TAPE)	
D1132	8-719-038-63	LED	SEL5220S-TH8C (CD)	
D1133	8-719-038-63	LED	SEL5220S-TH8C (TUNER)	
D1134	8-719-038-63	LED	SEL5220S-TH8C (PHONO) (HCD A190/D150)	
D1134	8-719-038-63	LED	SEL5220S-TH8C (VIDEO) (HCD-G1000)	
D1145	8-719-038-63	LED	SEL5220S-TH8C (VOLUME)	
D1171	8-719-987-63	DIODE	1N4148M	

< FLUORESCENT INDICATOR >

FI 601	1-517-258-11	INDICATOR TUBE, FLUORESCENT
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IC >

IC601	8-759-248-06	IC	uPD78042GF 053-3B9
IC602	8-749-920-83	IC	GP1U52XB
IC1101	8-759-634-51	IC	M5218AP
IC1102	8-759-634-51	IC	M5218AP
IC1103	8-759-820-62	IC	LB1639

Ref. No.	Part No.	Description	Remark			
		< COIL >				
L601	1-410-521-11	INDUCTOR	100uH			
		< TRANSISTOR >				
Q601	8-729-119-78	TRANSISTOR	2SC2785-HFE			
Q602	8-729-119-78	TRANSISTOR	2SC2785-HFE			
Q1102	8-729-141-26	TRANSISTOR	2SC3622A-LK			
Q1141	8-729-900-63	TRANSISTOR	DTA124ES			
Q1147	8-729-900-36	TRANSISTOR	DTA124ES			
Q1148	8-729-900-63	TRANSISTOR	DTA124ES			
Q1152	8-729-141-26	TRANSISTOR	2SC3622A-LK			

< RESISTOR >

R601	1-249-417-11	CARBON	1K	5%	1/4W
R603	1-249-437-11	CARBON	47K	5%	1/4W
R604	1-249-433-11	CARBON	22K	5%	1/4W
R605	1-249-433-11	CARBON	22K	5%	1/4W
R606	1-249-429-11	CARBON	10K	5%	1/4W
R607	1-249-429-11	CARBON	10K	5%	1/4W
R608	1-249-423-11	CARBON	3.3K	5%	1/4W
R609	1-249-417-11	CARBON	1K	5%	1/4W
R610	1-249-425-11	CARBON	4.7K	5%	1/4W
R611	1-249-429-11	CARBON	10K	5%	1/4W
R613	1-249-429-11	CARBON	10K	5%	1/4W
R614	1-249-429-11	CARBON	10K	5%	1/4W
R615	1-249-433-11	CARBON	22K	5%	1/4W
R616	1-249-433-11	CARBON	22K	5%	1/4W
R621	1-249-419-11	CARBON	1.5K	5%	1/4W
R622	1-247-807-31	CARBON	100	5%	1/4W
R623	1-249-406-11	CARBON	120	5%	1/4W
R624	1-249-406-11	CARBON	120	5%	1/4W
R635	1-249-419-11	CARBON	1.5K	5%	1/4W
R636	1-247-807-31	CARBON	100	5%	1/4W
R637	1-249-406-11	CARBON	120	5%	1/4W
R638	1-249-406-11	CARBON	120	5%	1/4W
R639	1-247-811-31	CARBON	150	5%	1/4W
R640	1-249-408-11	CARBON	180	5%	1/4W
R641	1-249-409-11	CARBON	220	5%	1/4W
R642	1-249-410-11	CARBON	270	5%	1/4W
R643	1-249-411-11	CARBON	330	5%	1/4W
R644	1-249-413-11	CARBON	470	5%	1/4W
R651	1-249-385-11	CARBON	2.2	5%	1/6W
R652	1-249-385-11	CARBON	2.2	5%	1/6W
R655	1-249-417-11	CARBON*	1K	5%	1/4W
R661	1-249-417-11	CARBON	1K	5%	1/4W
R662	1-249-417-11	CARBON	1K	5%	1/4W
R663	1-249-417-11	CARBON	1K	5%	1/4W
R664	1-249-417-11	CARBON	1K	5%	1/4W

# PANEL

Ref. No.	Part No.	Description	Remark
R665	1-249-417-11	CARBON	1K 5% 1/4W
R666	1-249-417-11	CARBON	1K 5% 1/4W
R1102	1-249-430-11	CARBON	12K 5% 1/4W
R1103	1-249-431-11	CARBON	15K 5% 1/4W
R1104	1-249-427-11	CARBON	6.8K 5% 1/4W
R1105	1-249-433-11	CARBON	22K 5% 1/4W
R1110	1-249-433-11	CARBON	22K 5% 1/4W
R1111	1-249-439-11	CARBON	68K 5% 1/4W
R1112	1-249-433-11	CARBON	22K 5% 1/4W
R1113	1-249-433-11	CARBON	22K 5% 1/4W
R1116	1-247-856-00	CARBON	11K 5% 1/4W
R1117	1-247-856-00	CARBON	11K 5% 1/4W
R1120	1-249-427-11	CARBON	6.8K 5% 1/4W
R1121	1-249-427-11	CARBON	6.8K 5% 1/4W
R1122	1-247-887-00	CARBON	220K 5% 1/4W
R1123	1-249-421-11	CARBON	2.2K 5% 1/4W
R1124	1-249-425-11	CARBON	4.7K 5% 1/4W
R1125	1-249-433-11	CARBON	22K 5% 1/4W
R1128	1-249-417-11	CARBON	1K 5% 1/4W
R1132	1-249-412-11	CARBON	390 5% 1/4W
R1135	1-249-437-11	CARBON (HCD-D150)	47K 5% 1/4W
R1136	1-249-437-11	CARBON (HCD-D150)	47K 5% 1/4W
R1141	1-249-435-11	CARBON	33K 5% 1/4W
R1145	1-249-412-11	CARBON	390 5% 1/4W
R1152	1-249-430-11	CARBON	12K 5% 1/4W
R1154	1-249-427-11	CARBON	6.8K 5% 1/4W
R1155	1-249-433-11	CARBON	22K 5% 1/4W
R1160	1-249-433-11	CARBON	22K 5% 1/4W
R1161	1-249-439-11	CARBON	68K 5% 1/4W
R1162	1-249-433-11	CARBON	22K 5% 1/4W
R1163	1-249-433-11	CARBON	22K 5% 1/4W
R1166	1-247-856-00	CARBON	11K 5% 1/4W
R1167	1-247-856-00	CARBON	11K 5% 1/4W
R1170	1-249-427-11	CARBON	6.8K 5% 1/4W
R1171	1-249-427-11	CARBON	6.8K 5% 1/4W
R1172	1-247-887-00	CARBON	220K 5% 1/4W
R1173	1-249-421-11	CARBON	2.2K 5% 1/4W
R1174	1-249-425-11	CARBON	4.7K 5% 1/4W
R1178	1-249-417-11	CARBON	1K 5% 1/4W
R1185	1-249-437-11	CARBON (HCD-D150)	47K 5% 1/4W
R1186	1-249-437-11	CARBON (HCD-D150)	47K 5% 1/4W
R1194	1-249-433-11	CARBON	22K 5% 1/4W
R1195	1-249-425-11	CARBON	4.7K 5% 1/4W
R1196	1-249-425-11	CARBON	4.7K 5% 1/4W

Ref. No.	Part No.	Description	Remark
		< COMPOSITION CIRCUIT BLOCK >	
RP602	1-232-998-11	COMPOSITION CIRCUIT BLOCK	
		< VARIABLE RESISTOR >	
RV1102	1-223-251-11	RES, VAR, CARBON 100K/100K (SURROUND)	
RV1103	1-241-351-11	RES, VAR, SLIDE 100K/100K (100Hz (3BAND GRAPHIC EQUALIZER)) (HCD-A190/G1000)	
RV1103	1-241-351-11	RES, VAR, SLIDE 100K/100K (BASS (TONE CONTROL)) (HCD-D150)	
RV1105	1-241-351-11	RES, VAR, SLIDE 100K/100K (1kHz (3 BAND GRAPHIC EQUALIZER)) (HCD-A190/G1000)	
RV1107	1-241-351-11	RES, VAR, SLIDE 100K/100K (10kHz (3BAND GRAPHIC EQUALIZER)) (HCD-A190/G1000)	
RV1107	1-241-351-11	RES, VAR, SLIDE 100K/100K (TREBLE (TONE CONTROL)) (HCD-D150)	
RV1109	1-223-539-11	RES, VAR, CARBON 100K/100K (VOLUME)	
		< SWITCH >	
S601	1-554-303-21	SWITCH, TACTILE (BAND)	
S602	1-554-303-21	SWITCH, TACTILE (SHIFT)	
S603	1-554-303-21	SWITCH, TACTILE (- (DUAL MODE TUNING))	
S604	1-554-303-21	SWITCH, TACTILE (+ (DUAL MODE TUNING))	
S616	1-554-303-21	SWITCH, TACTILE (MEMORY)	
S617	1-554-303-21	SWITCH, TACTILE (STEREO/MONO)	
S620	1-554-303-21	SWITCH, TACTILE (TAPE)	
S621	1-554-303-21	SWITCH, TACTILE (CD)	
S622	1-554-303-21	SWITCH, TACTILE (TUNER)	
S623	1-554-303-21	SWITCH, TACTILE (PHONO) (HCD-A190/D150)	
S623	1-554-303-21	SWITCH, TACTILE (VIDEO) (HCD-G1000)	
S624	1-554-303-21	SWITCH, TACTILE (TUNING/PRESET)	
		< VIBRATOR >	
X601	1-567-775-11	VIBRATOR, CERAMIC (4.19MHz)	

\*\*\*\*\*



Ref. No.	Part No.	Description	Remark			
*	1-650-429-11	POWER AMPLIFIER BOARD	*****			
		< CAPACITOR >				
C1201	1-126-162-11	ELECT	3.3uF	20%	50V	
C1202	1-162-286-31	CERAMIC	220PF	10%	50V	
C1203	1-162-286-31	CERAMIC	220PF	10%	50V	
C1204	1-124-482-11	ELECT	33uF	20%	35V	
C1206	1-124-120-11	ELECT	220uF	20%	25V	
C1208	1-124-472-11	ELECT	470uF	20%	10V	
C1210	1-136-165-00	FILM	0.1uF	5%	50V	
C1211	1-136-165-00	FILM	0.1uF	5%	50V	
C1231	1-136-165-00	FILM	0.1uF	5%	50V	
C1251	1-126-162-11	ELECT	3.3uF	20%	50V	
C1252	1-162-286-31	CERAMIC	220PF	10%	50V	
C1253	1-162-286-31	CERAMIC	220PF	10%	50V	
C1254	1-124-482-11	ELECT	33uF	20%	35V	
C1260	1-136-165-00	FILM	0.1uF	5%	50V	
C1261	1-136-165-00	FILM	0.1uF	5%	50V	
		< IC >				
IC1201	8-759-156-00	IC	TA8221AH			
		< RESISTOR >				
R1201	1-249-417-11	CARBON	1K	5%	1/4W	
R1203	1-249-413-11	CARBON	470	5%	1/4W	
R1218	1-249-385-11	CARBON	2.2	5%	1/6W	
R1219	1-249-385-11	CARBON	2.2	5%	1/6W	
R1251	1-249-417-11	CARBON	1K	5%	1/4W	
R1253	1-249-413-11	CARBON	470	5%	1/4W	
R1268	1-249-385-11	CARBON	2.2	5%	1/6W	
R1269	1-249-385-11	CARBON	2.2	5%	1/6W	
*****						
*	1-650-598-11	POWER BOARD	*****			
	1-533-217-31	HOLDER, FUSE				
		< CAPACITOR >				
AC1301	1-161-744-51	CERAMIC	0.01uF		400V	
C1348	1-136-165-00	FILM	0.1uF	5%	50V	
		< CONNECTOR >				
* CN1350	1-580-230-11	PIN, CONNECTOR (PC BOARD)	3P			
* CN1351	1-564-321-00	PIN, CONNECTOR	2P			

Ref. No.	Part No.	Description	Remark
< FUSE >			
△F1301	1-532-350-00	FUSE (4A/125V)	(AEP, UK)
△F1301	1-576-108-11	FUSE (4A/125V)	(US, Canadian)
△F1302	1-532-350-00	FUSE (4A/125V)	(AEP, UK)
△F1302	1-576-108-11	FUSE (4A/125V)	(US, Canadian)
< RESISTOR >			
R1391	1-202-725-00	SOLID	3.3M 10% 1/2W
		(US, Canadian)	
< TRANSFORMER >			
△T1301	1-423-912-11	TRANSFORMER, POWER	(US)
△T1301	1-423-913-11	TRANSFORMER, POWER	(AEP, UK)
△T1301	1-423-943-11	TRANSFORMER, POWER	(Canadian)
*****			
*	1-650-427-11	SW BOARD	
		*****	
< CONNECTOR >			
* CN951	1-568-942-11	PIN, CONNECTOR	4P
< SWITCH >			
S951	1-692-785-11	SWITCH, PUSH (3 KEY)	
		(DOLBY NR/TAPE SELECT/DUBBING SPEED)	
		(HCD-A190)	
S951	1-692-786-11	SWITCH, PUSH (2KEY)	
		(TAPE SELECT/DUBBING SPEED)	(HCD-G1000)
S951	1-692-788-11	SWITCH, PUSH (1 KEY)	(TAPE SELECT)
		(HCD-D150)	
*****			

The components identified by mark △ or dotted line with mark. △ are critical for safety. Replace only with part number specified.

Les composants identifiés par une marque △ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

Ref. No.	Part No.	Description	Remark
MISCELLANEOUS			
*****			
	4	1-575-664-31 WIRE, FLAT TYPE (23 CORE)	
△	5	1-690-609-11 CORD, POWER (US, Canadian)	
△	6	1-575-651-11 CORD, POWER (AEP)	
△	7	1-696-570-21 CORD, POWER (UK)	
	58	1-751-746-11 WIRE (FLAT TYPE) (21 CORE)	
	61	1-590-575-11 WIRE, FLAT TYPE (11 CORE)	
	80	1-690-708-11 CORD (WITH CONNECTOR)	
+	111	1-452-538-11 MAGNET	
	154	1-575-001-11 WIRE, FLAT TYPE (12 CORE)	
△	157	8-848-144-11 DEVICE, OPTICAL KSS-240A	
△	F1301	1-532-350-00 FUSE (4A/125V) (AEP, UK)	
△	F1301	1-576-108-11 FUSE (4A/125V) (US, Canadian)	
△	F1302	1-532-350-00 FUSE (4A/125V) (AEP, UK)	
△	F1302	1-576-108-11 FUSE (4A/125V) (US, Canadian)	
	HE901	1-543-673-11 HEAD, MAGNETIC (ERASE) (DECK B)	
	HP901	1-543-319-11 HEAD, MAGNETIC (REC/PB) (DECK A)	
	HRP901	1-543-319-11 HEAD, MAGNETIC (REC/PB) (DECK B)	
	M101	X-4917-504-1 MOTOR ASSY (SLED)	
	M102	X-4917-523-3 MOTOR ASSY (SPINDLE)	
	M151	A-4604-363-A MOTOR (L) ASSY	
	M901	X-3362-377-1 MOTOR (WID) ASSY	
△	S1301	1-572-267-61 SWITCH, PUSH (AC POWER) (1 KEY) (POWER)	
△	T1301	1-423-912-11 TRANSFORMER, POWER (US)	
△	T1301	1-423-913-11 TRANSFORMER, POWER (AEP, UK)	
△	T1301	1-423-943-11 TRANSFORMER, POWER (Canadian)	
*****			
ACCESSORIES & PACKING MATERIALS			
*****			
	1	467-430-11 COMMANDER, STANDARD (RM-S221)	
	2	181-754-21 COVER (MLY), BATTERY (For RM-S221)	
*		4-963-165-01 CUSHION	
*		4-965-466-01 INDIVIDUAL CARTON (AEP1)	
*****			

Ref. No.	Part No.	Description	Remark
*****			
HARDWARE LIST			
*****			
#1	7-621-255-15	SCREW +P 2X3	
#2	7-621-775-10	SCREW +B 2.6X4	
#3	7-621-775-20	SCREW +B 2.6X5	
#4	7-621-849-00	SCREW, TAPPING	
#5	7-623-921-01	RING, RETAINING, CAPSTAN	
#6	7-682-548-04	SCREW +BVTT 3X8 (S)	
#7	7-685-103-19	SCREW +P 2X5 TYPE2 NON-SLIT	
#8	7-685-133-19	SCREW +P 2.6X6 TYPE2	
#9	7-685-135-19	SCREW +BTP 2.6X10 TYPE2 N-S	
#10	7-685-646-79	SCREW +BVTP 3X8 TYPE2 N-S	
#11	7-688-001-01	W2, SMALL	

The components identified by mark △ or dotted line with mark △ are critical for safety. Replace only with part number specified.

Les composants identifiés par une marque △ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

# PS-LX56/LX56P

## SERVICE MANUAL



PHOTO : PS-LX56

PS-LX56/LX56P are the turntable section in LBT-A190/A195/A290/A290K/A295/A390/A390K/A395/A490/A490K/A495/D150/D250/D550/G1000/G2000.

*US Model*  
*Canadian Model*  
*PX Model*  
*Tourist Model*  
*PS-LX56*  
*AEP Model*  
*E Model*  
*Australian Model*  
*PS-LX56/LX56P*  
*UK Model*  
*PS-LX56P*

### SPECIFICATIONS

<b>Turntable</b>	<b>(PS-LX56)</b>	<b>Turntable</b>	<b>(PS-LX56P)</b>
Platter	30cm (12 in.)	Platter	30 cm
Motor	DC servo motor	Tone arm type	Dynamically balanced
Drive system	Belt drive	Cartridge type	Moving magnet type
Speed	33 1/3 rpm/45 rpm switchable	Stylus	Sony CN-234 (0.6 mil diamond)
Wow and flutter	0.2% (WRMS)	Mass	Approx. 2.3 kg (5 lb 1 oz)
Signal-to-noise ratio	60 dB (DIN-B)	Dimensions	Approx. 355 x 95 x 345 mm (14 x 3 3/4 x 13 3/4 inches) (w/h/d, including projections)
Automatic system	Return, reject		
<b>Tonearm</b>			
Type	Dynamically balanced		
Pivot-to-stylus length	203 mm (8 in.)		
Overall arm length	235 mm (9 1/4 in.)		
<b>Cartridge</b>			
Type	Moving magnet type		
Frequency response	20 Hz-20kHz		
Stylus	CN-234		
<b>General</b>			
Dimensions	355 x 94 x 345 mm(w/h/d) (14 x 3 3/4 x 13 3/4 inches) Approx. 2.5 kg (5 lb 8 oz)		
Weight			
Power requirement	US and Canadian model : 120V AC, 60Hz European model : 220-230V AC, 50/60Hz Australian model : 240V AC, 50Hz Model for other countries : 110-120V/220-240V adjustable with the voltage selector AC, 50/60Hz		
Power consumption	2 W		
Accessory supplied	45-rpm adaptor (1)		
Optional accessories	Replacement stylus CN-234 Stat spray XP-C10 Cleaner XP-C1, XP-C2		

Design and specifications subject to change without notice.

#### Note

This appliance conforms with EEC Directive 87/308/EEC regarding interference suppression.

STEREO TURNTABLE SYSTEM  
**SONY®**

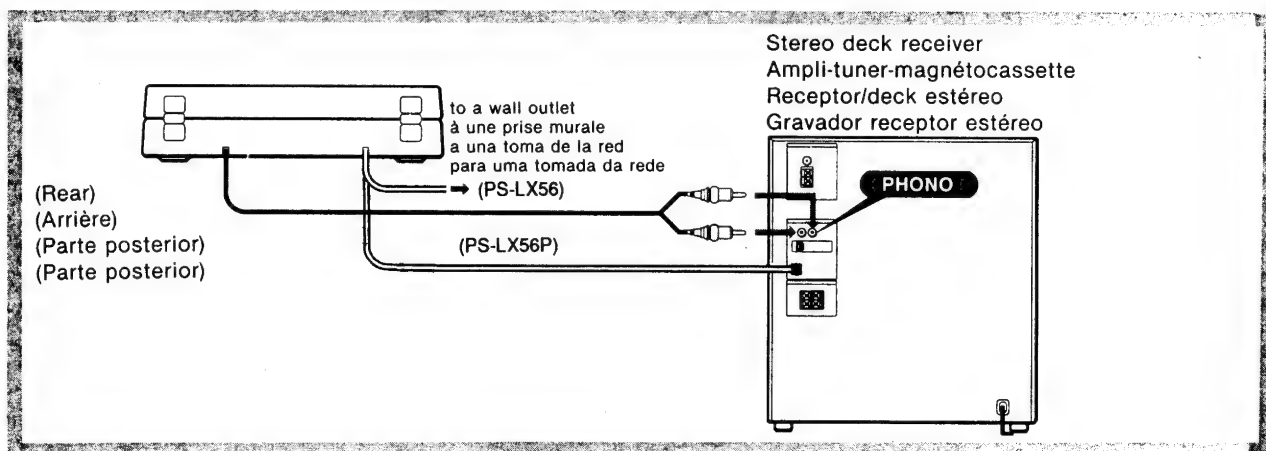
9-959-216-12  
2001G0200-1

Sony Corporation  
Home Audio Company

# Connections

## Note

Connect the red plug to the right-channel jack (R), and the white plug to the left-channel jack (L).



## Notes on installation

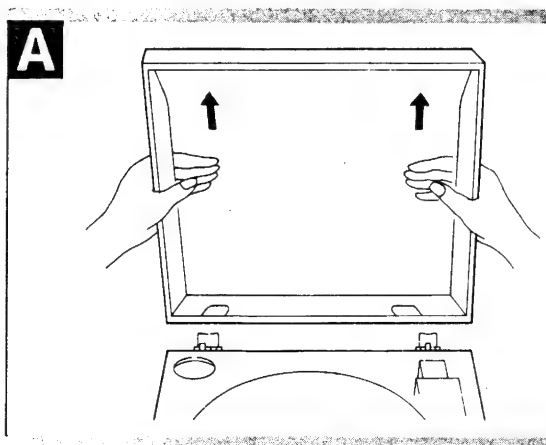
- Place the turntable on a level surface.
- Avoid placing the unit near electrical appliances (such as a television, hair dryer, or fluorescent lamp) which may cause hum or noise.
- Place the turntable where it will not be subject to any vibration, such as from speakers, slamming of doors, etc.
- Keep the unit away from direct sunlight, extremes of temperature, and excessive dust and moisture.

## Nota

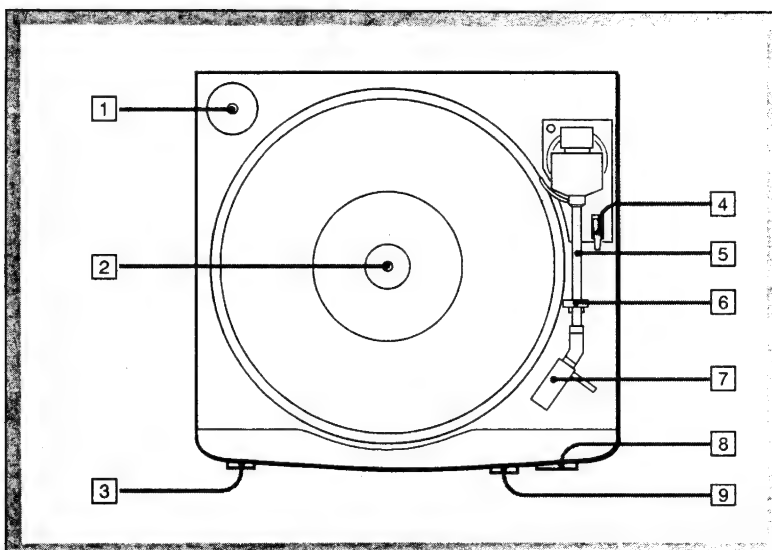
Conecte la clavija roja a la toma del canal derecho (R), y la blanca a la del canal izquierdo (L).

## To remove the dust cover A

Open the cover fully and pull it up.

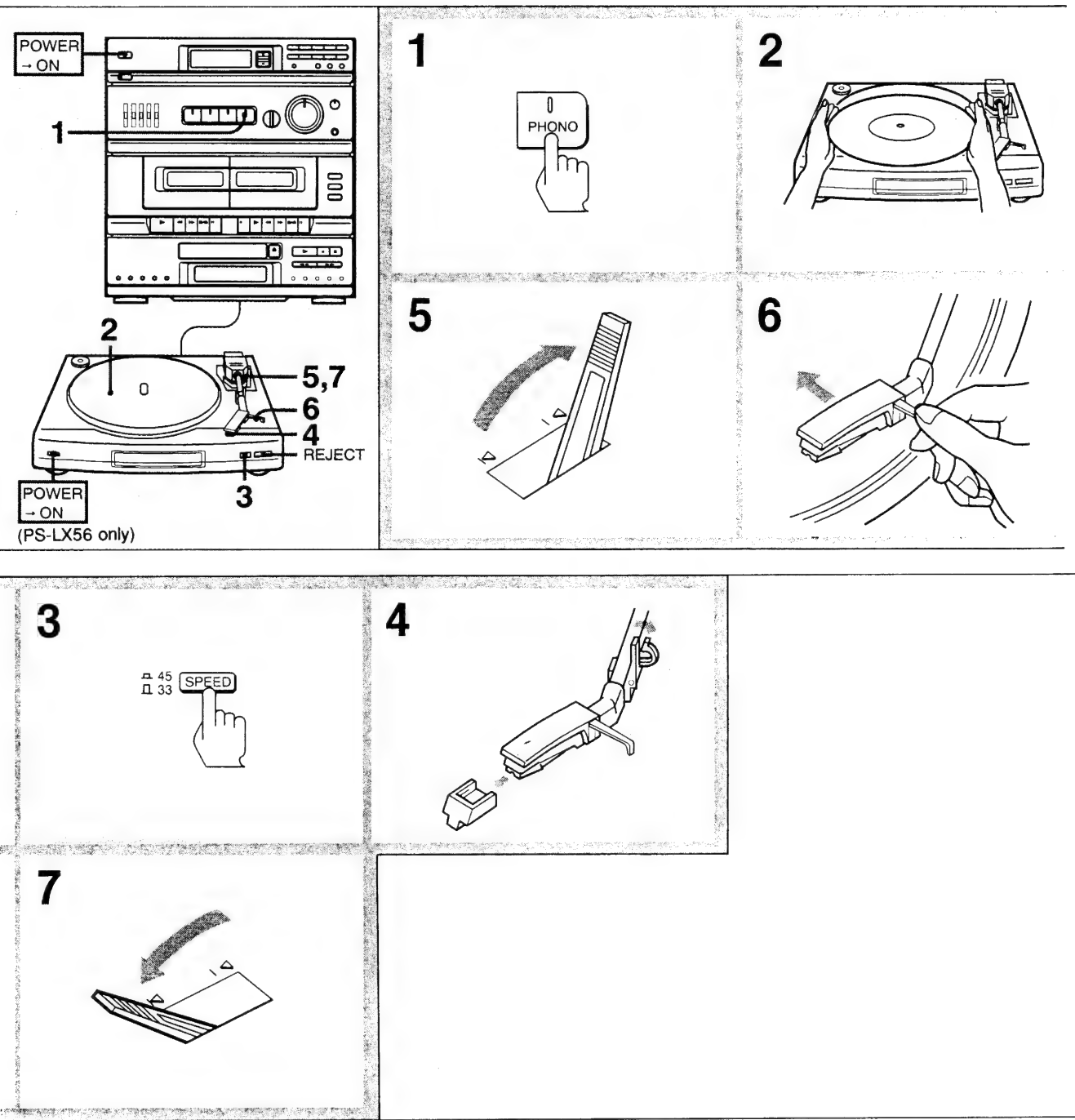


## Location of Controls



- 1 45-rpm adaptor
- 2 Centre spindle
- 3 POWER switch (PS-LX56)
- 4 Cueing lever
- 5 Tonearm
- 6 Armrest
- 7 Cartridge
- 8 REJECT button
- 9 Speed selector

Playing Records



When the record is played to the end, the tonearm returns to the armrest and the turntable stops.

To stop during play, press REJECT.

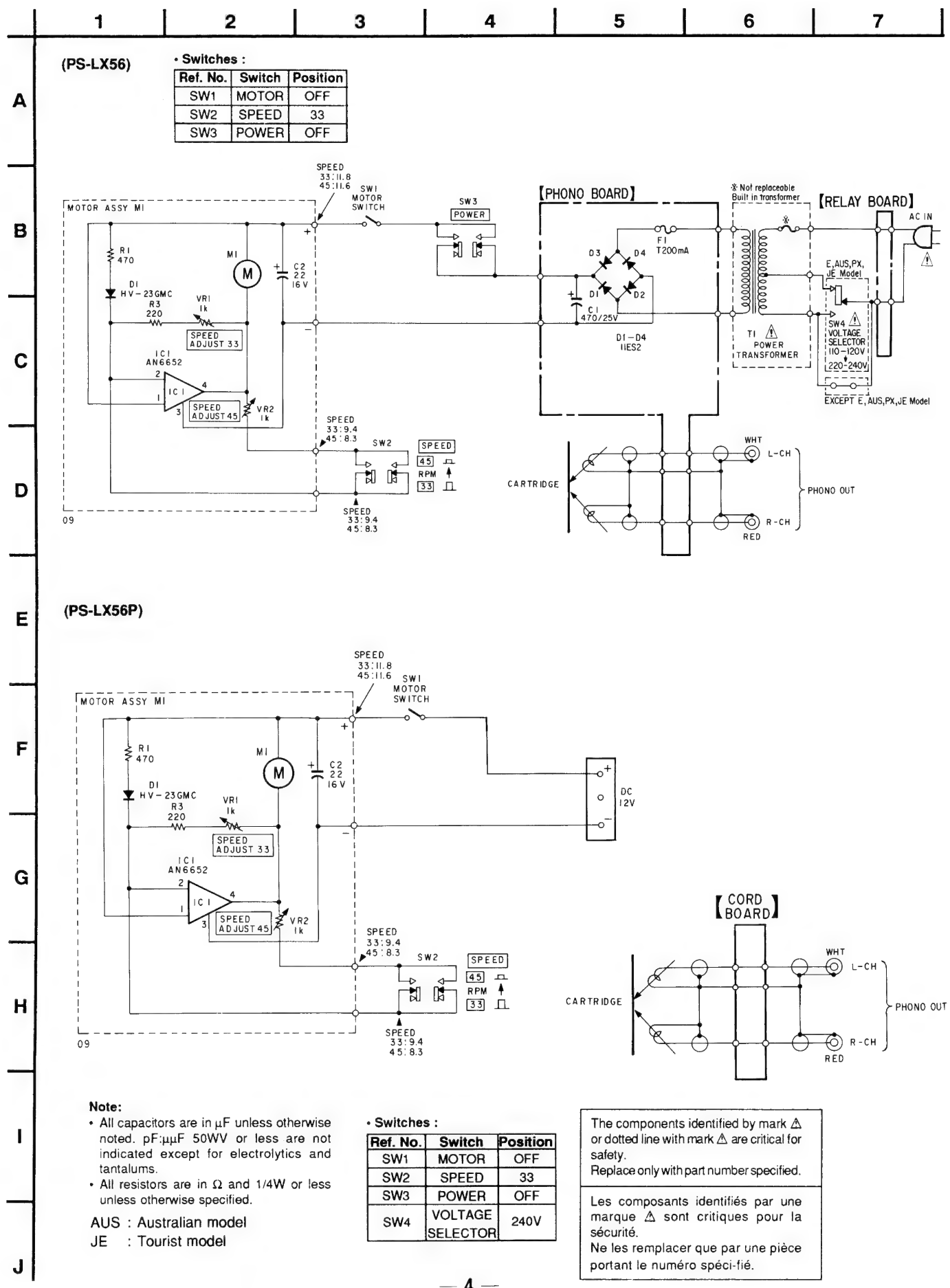
To play a different part of the record  
Lift the tonearm by setting the cueing level to ▽, move the tonearm by hand to the desired point, then set the cueing lever to ▽.

To play a 17-cm record  
Use the supplied adaptor

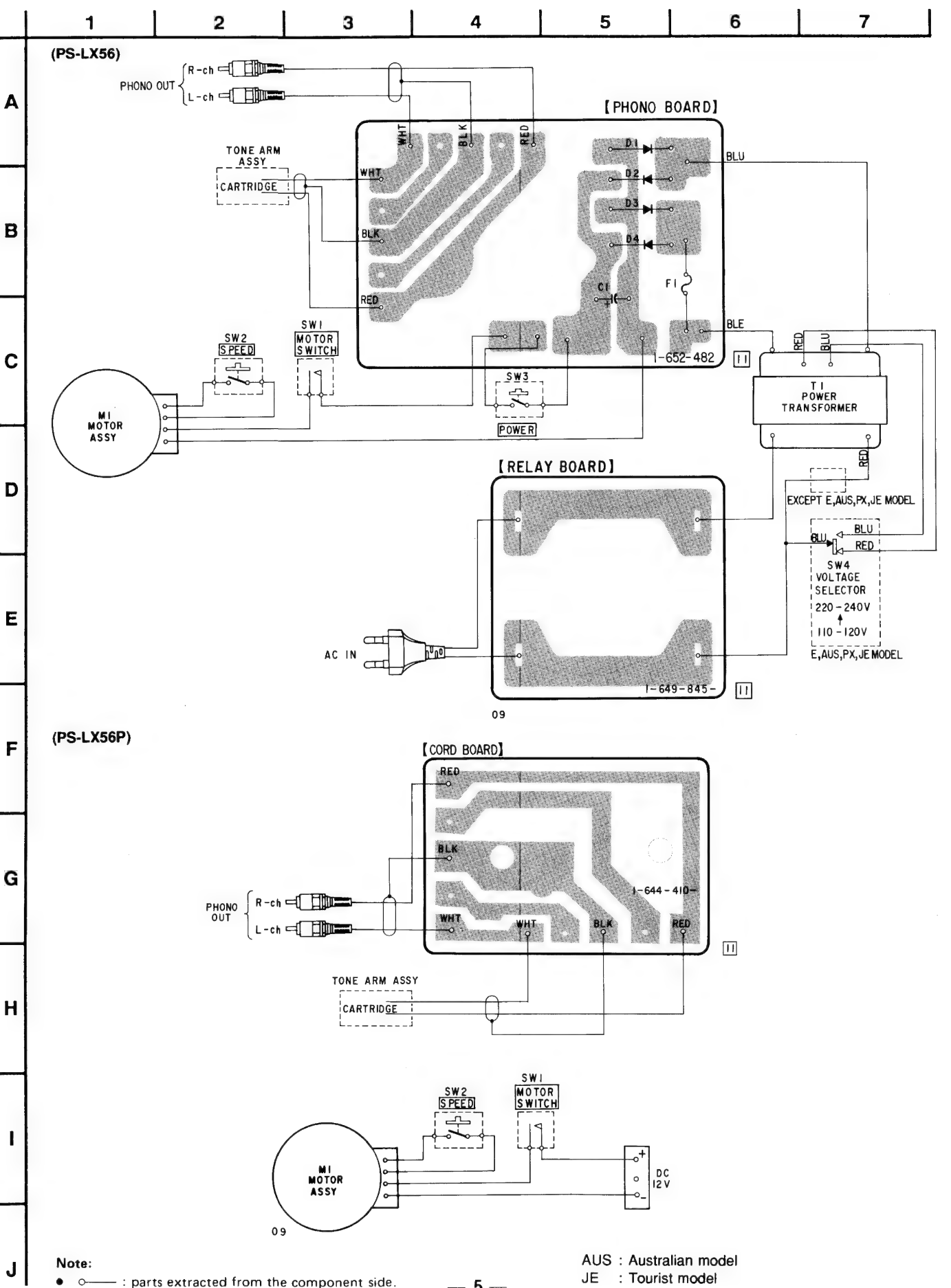
If the tonearm moves outward when you move it close to the centre  
Do not resist this movement, as it may damage the automatic return mechanism.

If the tonearm does not return to its armrest  
Press REJECT.

SCHEMATIC DIAGRAMS



WIRING DIAGRAMS





CORD PHONO RELAY

EXPLODED VIEW

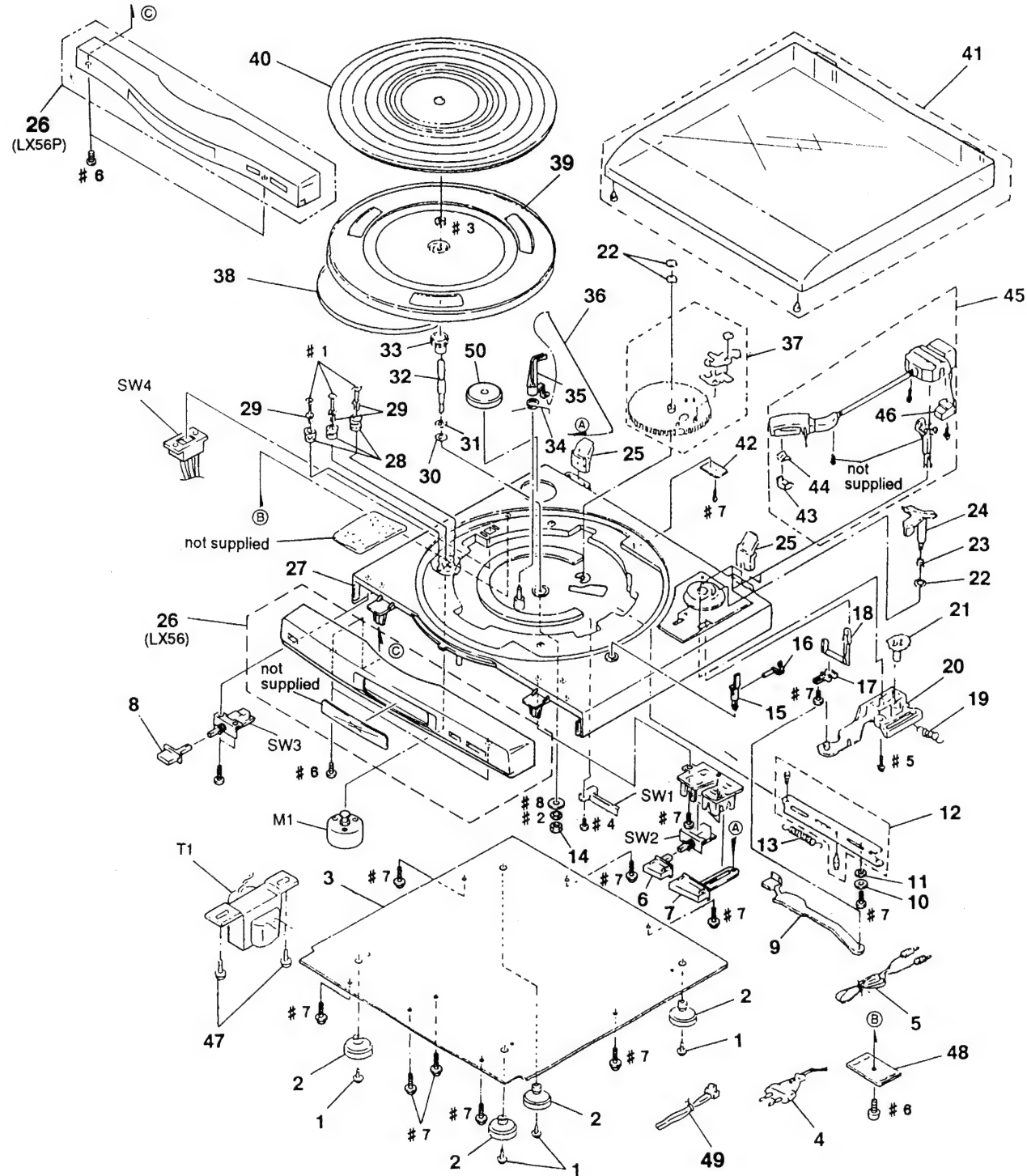
NOTE:

- -XX, -X mean standardized parts, so they may have some difference from the original one.
- Items marked " \* " are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- The mechanical parts with no reference number in the exploded views are not supplied.

- AUS : Australian model
- CND : Canadian model
- EE : East European model
- IT : Italian model
- MX : Mexican model
- EA : Saudi Arabia model
- SP : Singapore model
- MY : Malaysia model
- JE : Tourist

The components identified by mark  $\Delta$  or dotted line with mark  $\Delta$  are critical for safety.  
Replace only with part number specified.

Les composants identifiés par une marque  $\Delta$  sont critiques pour la sécurité.  
Ne les remplacer que par une pièce portant le numéro spécifié.



Ref.No.	Part No.	Description	Remark
1	4-950-497-01	FOOT SEAT	
2	4-950-490-01	PLASTIC STAND	
* 3	4-961-804-01	BUTTON BOARD	
$\Delta$ 4	1-575-651-61	CORD, AC (LX56: AEP, EA, EE, IT, MX, MY, CIS, SP)	
$\Delta$ 4	1-575-975-11	CORD, AC (LX56: CND, US)	
$\Delta$ 4	1-590-074-11	CORD, AC (LX56: E)	
$\Delta$ 4	1-690-608-11	CORD, AC (LX56: AUS)	
$\Delta$ 4	1-696-570-21	CORD, AC (LX56: UK)	
5	1-555-116-11	CORD, PHONO...(BLACK)	
6	4-964-177-01	KNOB SPEED...(BLACK)	
6	4-964-177-11	KNOB SPEED	...(LX56:SILVER, SILVER METALLIC)
7	4-964-178-01	KNOB REJECT...(BLACK)	
7	4-964-178-11	KNOB REJECT	...(LX56:SILVER, SILVER METALLIC)
8	4-964-184-01	KNOB POWER (LX56:BLACK)	
8	4-964-184-11	KNOB POWER	...(LX56:SILVER, SILVER METALLIC)
9	4-947-487-01	RETURN LINK	
10	4-890-173-00	WASHER	
11	3-659-350-00	WASHER	
12	A-4604-947-A	RETURN ASSY, LEVER	
13	4-947-485-01	SPRING (22)	
14	4-947-510-01	NUT	
15	4-947-491-01	ARM REST	
16	A-4660-499-A	ARM CLIP ASSY	
17	4-947-477-01	CUEING (BASE)	
18	4-947-468-01	LEVER, CUEING	
19	4-963-537-01	SPRING	
20	4-963-536-01	LINK RETURN	
21	4-963-535-01	ADJUST CAM	
22	4-947-514-01	4MM CS RING	
23	4-947-467-01	SPRING (6)	
24	4-947-466-01	TONE ARM ELEVATOR	
25	A-4660-498-A	HINGE ASSY	
26	A-4384-982-A	PANEL (B) ASSY, FRONT (LX56: SILVER)	
26	A-4411-941-A	PANEL (B) ASSY, FRONT (LX56: SILVER METALLIC)	
26	A-4660-577-A	FRONT PANEL (G) ASSY (LX56: GRAY) (US)	
26	A-4660-578-A	FRONT PANEL (G) ASSY (LX56: BLACK)	
26	A-4660-976-A	FRONT PANEL (G) ASSY (LX56P)	
* 27	4-950-487-01	MAIN CABINET (B)...(BLACK)	
* 27	4-950-487-11	MAIN CABINET (B) ...(LX56:SILVER, SILVER METALLIC)	
28	4-947-505-01	CUSHION MOTOR	
29	4-947-504-01	COLLAR	
30	3-451-162-00	WASHER (56)	
31	3-701-445-21	WASHER	
32	4-947-498-01	STELL BALL	
33	4-947-497-01	GEAR	
34	4-947-496-01	SPRING (34)	
35	4-947-495-01	WIPER REJECT	
36	4-948-101-01	SPRING (38)	
37	A-4604-916-A	GEAR ASSY, SPUR	
38	4-947-503-01	BELT	

Ref.No.	Part No.	Description	Remark
39	4-947-494-01	TURNTABLE PLATTER	
40	4-947-539-01	RUBBER MAT	
41	A-4604-946-A	DUST COVER ASSY	
* 42	1-652-482-11	PHONO BOARD (LX56)	
* 42	1-644-410-11	CORD BOARD (LX56P)	
43	4-948-095-01	COVER, CARTRIDGE	
44	4-951-290-01	STYLUS (CN-234)	
45	A-4604-940-A	ARM ASSY, TONE	
46	4-947-464-01	COUNTER WEIGHT	
47	4-952-961-01	SCREW (LX56)	
* 48	1-649-845-11	RELAY BOARD (LX56)	
49	1-557-109-21	CORD, DC (LX56P)	
50	3-701-806-00	ADAPTOR, 45	
M1	A-4604-945-A	MOTOR ASSY	
SW1	1-570-666-11	SWITCH (LEAF)	
SW2	1-571-089-11	SWITCH, PUSH (SPEED) (1 KEY)	
SW3	1-692-211-11	SWITCH, PUSH (POWER) (1 KEY) (LX56)	
$\Delta$ SW4	1-692-835-11	VOLTAGE SELECTOR (LX-56: AUS, E, MX, MY, SP)	
$\Delta$ T1	1-450-987-11	TRANSFORMER, POWER (LX56: AEP, EE, IT, CIS)	
$\Delta$ T1	1-450-987-21	TRANSFORMER, POWER (LX56: AUS, E, PX, EA, JE, MX, SP)	
$\Delta$ T1	1-450-987-31	TRANSFORMER, POWER (LX56: MY)	
$\Delta$ T1	1-450-987-41	TRANSFORMER, POWER (LX56: U, CA)	

ELECTRICAL PARTS LIST

NOTE:

- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- -XX, -X mean standardized parts, so they may have some difference from the original one.
- RESISTORS  
All resistors are in ohms  
METAL: Metal-film resistor  
METAL OXIDE: Metal Oxide-film resistor  
F : nonflammable
- Items marked " \* " are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- Hardware (# mark) list is given in the last of this parts list.

- SEMICONDUCTORS  
In each case, u:  $\mu$ , for example:  
uA...:  $\mu$  A..., uPA...:  $\mu$  PA...,  
uPB...:  $\mu$  PB..., uPC...:  $\mu$  PC...,  
uPD...:  $\mu$  PD...
- CAPACITORS  
uF :  $\mu$  F
- COILS  
uH :  $\mu$  H
- AUS : Australian model
- CND : Canadian model
- EE : East European model
- IT : Italian model
- MX : Mexican model
- EA : Saudi Arabia model
- SP : Singapore model
- MY : Malaysia model
- JE : Tourist

The components identified by mark  $\Delta$  or dotted line with mark  $\Delta$  are critical for safety.  
Replace only with part number specified.

Les composants identifiés par une marque  $\Delta$  sont critiques pour la sécurité.  
Ne les remplacer que par une pièce portant le numéro spécifié.

Ref.No.	Part No.	Description	Remark	Ref.No.	Part No.	Description	Remark
*	1-644-410-11	CORD BOARD (LX56P)				ACCESSORIES & PACKING MATERIALS	
		*****				*****	
						3-758-045-11	MANUAL INSTRUCTION (English, French, Spanish, Portuguese) (LX56 AEP, CND)
*	1-652-482-11	PHONO BOARD (LX56)				3-758-045-21	MANUAL INSTRUCTION (English) (LX56 US, UK)
		*****				3-758-045-41	MANUAL INSTRUCTION (German, Dutch, Swedish, Italian) (LX56 AEP, IT)
		< CAPACITOR >				3-758-045-51	MANUAL INSTRUCTION (English, French, Spanish, Chinese) (LX56 AUS, E, PX, MX, EA, MY, SP, JE)
C1	1-126-012-11	ELECT 470uF	16V			3-758-045-61	MANUAL INSTRUCTION (English, German, Polish) (LX56 EE, CIS)
		< DIODE >					
D1	8-719-200-82	DIODE 11ES2		*	4-947-532-01	SNOW BOX (L)	
D2	8-719-200-82	DIODE 11ES2		*	4-947-533-01	SNOW BOX (R)	
D3	8-719-200-82	DIODE 11ES2			3-701-806-00	ADAPTOR, 45	
D4	8-719-200-82	DIODE 11ES2				*****	
		< FUSE >				*****	
$\Delta$ F1	1-532-613-XX	FUSE TIME-LAG (T200mA)				HARDWARE LIST	
		*****				*****	
				#1	7-621-773-87	SCREW (64)	
*	1-649-845-11	RELAY BOARD (LX56)		#2	7-623-210-22	WASHER (57)	
		*****		#3	7-624-110-04	GMM E RING	
				#4	7-685-105-01	SCREW (59)	
				#5	7-685-645-79	SCREW (68)	
				#6	7-685-646-79	SCREW (60)	
				#7	7-685-647-79	SCREW (58)	
				#8	7-688-005-01	WASHER (69)	



MEMO

## REVISION HISTORY

Clicking the version allows you to jump to the revised page.

Also, clicking the version at the upper right on the revised page allows you to jump to the next revised page.

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# SS-D255/G2000

## SERVICE MANUAL

*US Model  
Canadian Model*

### SPECIFICATIONS

Speaker System	2-way speaker system (SS-G2000) 3-way speaker system (SS-D255)
Mass	Approx. 3 kg PC speaker (6 lb 10 oz)
Dimensions	Approx. 220 × 395 × 180 mm (8 <sup>3</sup> / <sub>4</sub> × 15 <sup>5</sup> / <sub>8</sub> × 7 <sup>1</sup> / <sub>8</sub> inches) (w/h/d, including projections)

Design and specifications are subject to change without notice.

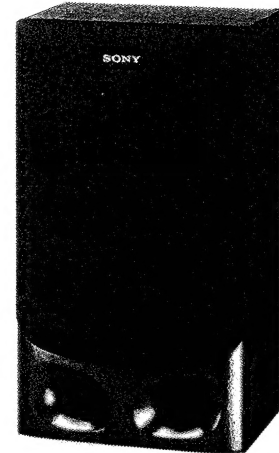


Photo: SS-G2000

SS-D255 is the speaker system in LBT-D150 and LBT-D250.

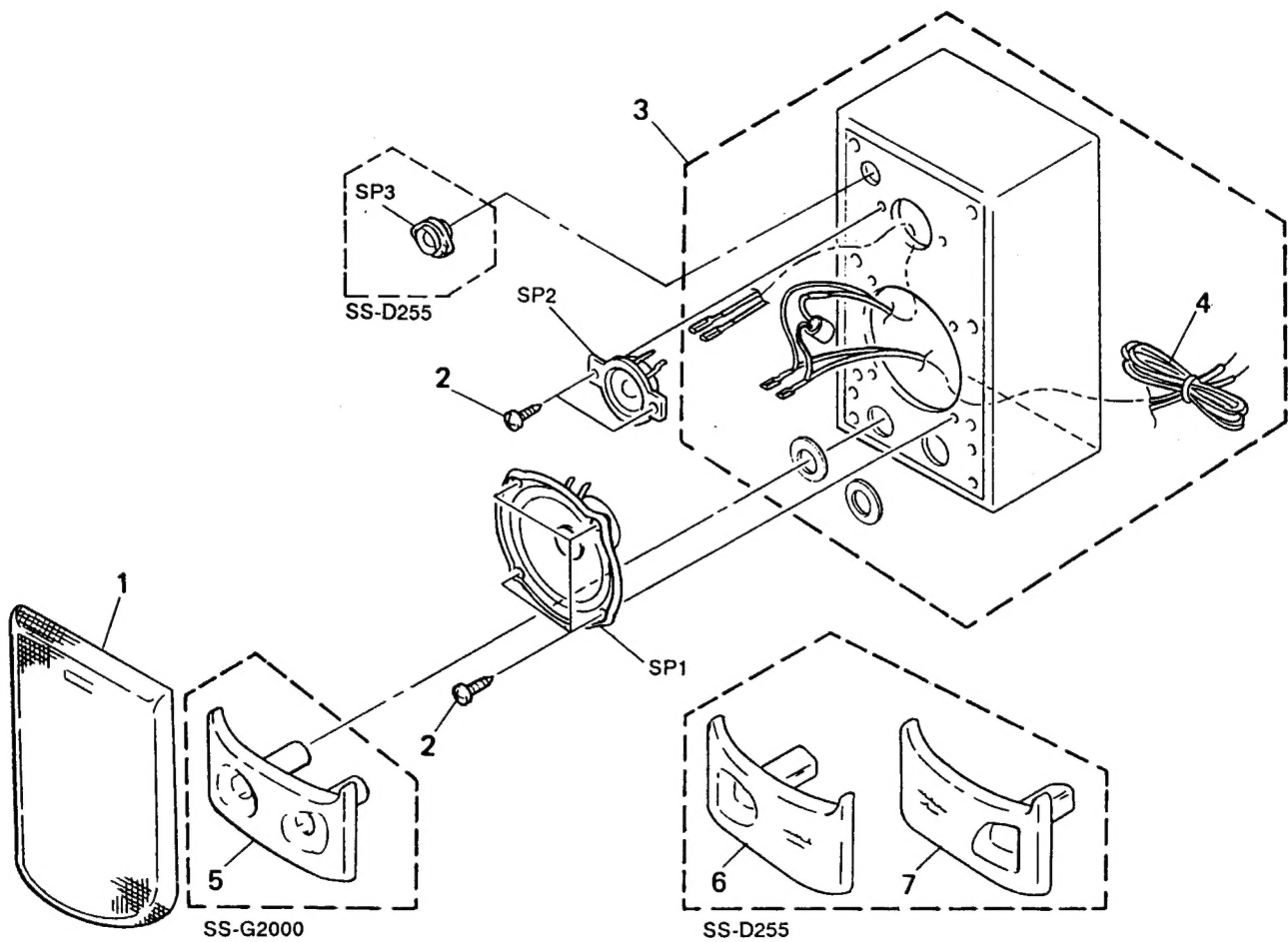
SS-G2000 is the speaker system in LBT-G1000, LBT-A190, LBT-G2000 and LBT-A195.

SPEAKER SYSTEM  
**SONY**®

EXPLODED VIEW AND PARTS LIST

NOTE:

- -XX and -X mean standardized parts, so they may have some difference from the original one.
- Items marked "\*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- The mechanical parts with no reference number in the exploded views are not supplied.



Ref. No.	Part No.	Description	Remark
1	X-4944-220-1	FRAME ASSY, GRILLE	
2	4-874-614-61	SCREW (M3. 5X16)	
* 3	A-4353-685-A	CABINET ASSY, SPEAKER (G2000)	
* 3	A-4353-678-A	CABINET ASSY, SPEAKER (D255)	
4	1-575-696-11	CORD, SPEAKER (WITH(C))	
* 5	X-4944-221-1	DUCT ASSY, ORNAMENTAL (G2000)	
* 6	X-4944-224-1	DUCT (L) ASSY, ORNAMENTAL (D255)	
* 7	X-4944-225-1	DUCT (R) ASSY, ORNAMENTAL (D255)	
SP1	1-504-173-11	SPEAKER (16cm)	
SP2	1-504-174-11	SPEAKER (5cm)	
SP3	1-544-453-21	SPEAKER (2cm) (D255)	

Ref. No.	Part No.	Description	Remark
		ACCESSORIES & PACKING MATERIALS	
		*****	
*	4-964-535-01	CUSHION	